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BULLETIN OF THE  
OKLAHOMA AGRICULTURAL AND  
MECHANICAL COLLEGE

VOL. 19

JUNE, 1922

NO. 4


*General Catalog*  
1921-1922



*Announcements*  
1922-1923

PUBLISHED MONTHLY BY THE COLLEGE  
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OKLAHOMA AGRICULTURAL AND  
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*Thirty-first*  
*General Catalog*  
*1921-1922*

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*Announcements*  
*1922-1923*

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# 1922

## JULY

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## AUGUST

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## COLLEGE CALENDAR

1922-1923

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### *FALL QUARTER*

1922

- Sept. 5. Tuesday—8:00 a. m. Entrance Examinations; Registration begins.  
Sept. 6. Wednesday—Registration completed.  
Sept. 7. Thursday—Classwork begins at 8:00 a. m.  
Sept. 15. Friday—President's Reception to Faculty and Students.  
Nov. 11. Saturday—Armistice Day, a Holiday; Patriotic Program.  
Nov. 29. Wednesday—Fall Quarter Closes.  
Nov. 30. Thanksgiving Day, a Holiday.

### *WINTER QUARTER.*

1922

- Dec. 4. Monday—Winter Quarter Begins.  
Dec. 22. Friday—Christmas Holiday Begins.

1923.

- Jan. 3. Wednesday—Work of Second Quarter Resumed.  
Feb. 22. Thursday—Washington's Birthday, a Holiday.  
March 3. Saturday—Winter Quarter Closes.

### *SPRING QUARTER*

1923.

- March 5. Monday—Spring Quarter Begins.  
March 30. Friday Noon—Easter Holiday Begins.  
April 3. Tuesday—8:00 a. m. Classwork Resumed.  
May 19. Saturday—Senior Examinations Close.  
May 20. Sunday—Baccalaureate Sermon.  
May 21. Monday—Graduation Exercises.  
May 26. Saturday—Spring Quarter Closes.

### *SUMMER SCHOOL*

- May 31. Thursday—Summer School Begins.  
July 4. Wednesday—Independance Day, a Holiday.  
July 23. Sunday—Baccalaureate Sermon.  
July 26. Thursday—Graduation Exercises.  
July 28. Saturday—Summer School Closes.

Friday afternoon and Saturday of the Interscholastic Meet are Holidays.

## BOARD OF REGENTS

(The Oklahoma State Board of Agriculture)

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JOHN A. WHITEHURST, <i>President</i>	-	-	-	-	-	Oklahoma City	
J. J. SAVAGE,	-	-	-	-	-	-	Hollis
J. N. ROACH	-	-	-	-	-	-	Atoka
A. T. WHITWORTH	-	-	-	-	-	-	Carmen
WILLIAM H. CRUME	-	-	-	-	-	-	Okmulgee

## COLLEGE FACULTY

(Listed in point of priority)

### PRESIDENT

JAMES BURNETTE ESKRIDGE, A. M., University of Chicago, 1903; Ph. D., *ibid.*, 1912; *President, Oklahoma Agricultural and Mechanical College, 1921—.*

### DEANS

LOWERY LAYMON LEWIS, B. S. A., Texas Agricultural and Mechanical College, 1893; M. S., *ibid.*, 1894; D. V. M., Iowa State College, 1896; Professor of Veterinary Medicine and State Veterinarian, Oklahoma Agricultural and Mechanical College, 1896-1899; Professor of Veterinary Medicine, Professor of Zoology, and Experiment Station Veterinarian, *ibid.*, 1899-1900; Professor of Veterinary Medicine, Professor of Zoology, Experiment Station Bacteriologist and Veterinarian, *ibid.*, 1900-1913; Professor of Veterinary Medicine, Professor of Zoology, Experiment Station Bacteriologist and Veterinarian, Dean of School of Veterinary Medicine, Dean of School of Science and Literature, Acting Director of Experiment Station, *ibid.*, 1913-14; Professor of Veterinary Medicine, Professor of Zoology, Experiment Station Bacteriologist and Veterinarian, Dean of School of Veterinary Medicine, Dean of School of Science and Literature, Acting President, *ibid.*, 1914-1915; Professor of Veterinary Medicine, Professor of Zoology, Experiment Station Bacteriologist and Veterinarian, Dean of School of Veterinary Medicine, Dean of School of Science and Literature, *ibid.*, 1916-1921; *Professor of Veterinary Medicine, Professor of Zoology, Experiment Station Bacteriologist and Veterinarian, Dean of School of Veterinary Medicine, Dean of School of Science and Literature, and Dean of the Faculty, ibid., 1921—.*

HERBERT PATTERSON, A. B., Wesleyan University, 1908; A. M., Wesleyan University, 1911; A. M., Yale University, 1911; Ph. D., Yale University, 1913; *Professor of Education, Dean of School of Education and Director of Summer School, Oklahoma Agricultural and Mechanical College, 1919—.*

MALCOLM ALFRED BEESON, B. S., Auburn (Alabama) College, 1900; D. Sc., Meridian College, 1910; Professor of Agronomy and Experiment Station Agronomist, Oklahoma Agricultural and Mechanical College, 1915-1921; *Dean of School of Agriculture, and Agricultural Division, ibid., 1921—.*

HENRY FULLER HOLTZCLAW, A. B., University of Arkansas, 1913; Ph. D., Johns Hopkins University, 1917; *Professor of Economics and Dean of School of Commerce and Marketing, Oklahoma Agricultural and Mechanical College, 1921—.*

RICHARD GAINES TYLER, C. E., University of Texas, 1908; S. B. in C. E., Massachusetts Institute of Technology, 1910; *Professor of Civil Engineering and Dean of School of Engineering, Oklahoma Agricultural and Mechanical College, 1921—.*

ELLA NORA MILLER, B. S., Oklahoma Agricultural and Mechanical College, 1914; M. S., Iowa State College, 1921; *Professor of Domestic Science and Dean of School of Home Economics, Oklahoma Agricultural and Mechanical College, 1921—.*

WILLIAM AMMON CONNER, B. S., Oklahoma Agricultural and Mechanical College, 1917; *Director of Extension, ibid., 1921—.*

CARL THOMAS DOWELL, B. A., Texas Christian University, 1901; B. S., University of Texas, 1902; Ph. D., University of California, 1915; Experiment Station Chemist, Oklahoma Agricultural and Mechanical College, 1918-1921; *Director of Experiment Station, ibid., 1921—.*

MARY CATHERINE BROGDON, B. A., University of Tennessee, 1916; M. A., Peabody College, 1921; *Dean of Women, Oklahoma Agricultural and Mechanical College, 1921—.*

JAMES ROBERT CAMPBELL, B. A., Antrim College, Ohio, 1878; M. A., *ibid.*, 1878; M. A., University of Oklahoma, 1916; Director School of Correspondence-Study, Oklahoma Agricultural and Mechanical College, 1921-1922; *Dean of School of Correspondence-Study, ibid., 1922—.*

### PROFESSORS

CARL GUNDERSEN, A. B., Leland Stanford University, 1897; A. M., Columbia University, New York, 1899; Ph. D., *ibid.*, 1902; *Professor of Mathematics, Oklahoma Agricultural and Mechanical College, 1909—.*

## Oklahoma A. and M. College

- CHARLES EMERSON SANBORN, A. B., University of Kansas, 1903; A. M., *ibid.*, 1905; *Professor of Entomology, Oklahoma Agricultural and Mechanical College, 1909—.*
- CHARLES OSCAR CHAMBERS, A. B., Indiana University, 1891; A. M., *ibid.*, 1895; Ph. D., Washington University, 1913; *Professor of Botany, Oklahoma Agricultural and Mechanical College, 1915—.*
- FRED MAAS ROLFS, B. S., Iowa State College, 1897; M. S., Colorado State Agricultural College, 1903; Ph. D., Cornell University, 1913; *Professor of Horticulture, Oklahoma Agricultural and Mechanical College, 1915—.*
- EDWARD CLARK GALLAGHER, B. S., Oklahoma Agricultural and Mechanical College, 1909; Diploma, Chautauqua School of Physical Education, 1921; Assistant Director of Athletics, Oklahoma Agricultural and Mechanical College, 1909-1913; Director of Physical Education, *ibid.*, 1915-1921; *Professor of Physical Education and Athletic Director, ibid., 1921—.*
- BOHUMIL MAKOVSKY, *Director of Music, and Professor of Brass and Reed Instruments, Oklahoma Agricultural and Mechanical College, 1915—.*
- NORA AMARYLLIS TALBOT, B. S., Oklahoma Agricultural and Mechanical College, 1910; B. S., *ibid.*, 1921; A. M., Columbia Teachers' College, 1922; *Professor of Domestic Art, Oklahoma Agricultural and Mechanical College, 1915—.*
- ARTHUR CHRISTOPHER BAER, B. S. A., University of Wisconsin, 1911; *Professor of Dairying, Oklahoma Agricultural and Mechanical College, 1916—.*
- DeWITT TALMADGE HUNT, B. S., Valparaiso University, 1908; B. M. T. *ibid.*, 1908; Instructor in Shops, Oklahoma Agricultural and Mechanical College, 1915-1917; *Superintendent of Shops, ibid., 1917—.*
- HARRY EMBLETON, B. S., Cornell University, 1912; *Professor of Poultry Husbandry, Oklahoma Agricultural and Mechanical College, 1917—.*
- \*HILTON IRA JONES, A. B., Parker College, 1903; A. M., Drake University, 1904; Ph. D., University of South Dakota, 1915; *Professor of Chemistry, Oklahoma Agricultural and Mechanical College, 1918—.*
- LESLIE EUGENE HAZEN, B. S., Kansas Agricultural College, 1906; M. E., Cornell University, 1916; *Professor of Rural Engineering, Oklahoma Agricultural and Mechanical College, 1919—.*
- WARREN LALE BLIZZARD, B. S., Kansas Agricultural College, 1910; Assistant Animal Husbandman, Oklahoma Agricultural and Mechanical College, 1915-1917; Acting Head of Animal Husbandry Department, *ibid.*, 1917-1919; *Professor of Animal Husbandry, ibid., 1919—.*
- OLIN MITCHELL CLARK, B. S., Clemson College, 1909; *Professor of Agricultural Education, Oklahoma Agricultural and Mechanical College, 1919—.*
- CHARLES LEONARD KEZER, B. S., Oklahoma Agricultural and Mechanical College, 1901; A. B., Kansas State University, 1914; Principal of Secondary School, Oklahoma Agricultural and Mechanical College, 1919-1922; *Professor of Secondary Education and Principal of Secondary School, ibid., 1922—.*
- ALBERT SAMUEL HIATT, A. B., University of the Pacific, 1896; A. B., Leland Stanford, Jr., University, 1897; *Professor of History, Oklahoma Agricultural and Mechanical College, 1920—.*
- JOHN HOFFER CLOUD, A. B., Valparaiso University, 1896; A. M., Johns Hopkins University, 1917; Ph. D., Indiana University, 1922; *Professor of Physics, Oklahoma Agricultural and Mechanical College, 1920—.*
- ALMON AL ARNOLD, A. B., Wittenberg College, 1912; A. M., *ibid.*, 1920; Certificate de suficiencia del curso para extranjeros, junta para ampliacion de estudios de Madrid, 1920; Instructor in Foreign Languages, Oklahoma Agricultural and Mechanical College, 1913-1918; Assistant Professor, *ibid.*, 1918-1919; Professor of Foreign Languages, *ibid.*, 1920-1922; *Professor of Modern Languages, ibid., 1922—.*
- DAVID TERRY MARTIN, A. B., Emory and Henry College, 1908; *Professor of Public Speaking, Oklahoma Agricultural and Mechanical College, 1921—.*
- WILLIAM BENJAMIN PARKS, A. M., Texas Christian University, 1892; Ph. D., *ibid.*, 1894; S. M., University of Chicago, 1920; *Professor of Chemistry, Oklahoma Agricultural and Mechanical College, 1921—.*
- WILLIAM PTOLEMY POWELL, B. A., Richmond College, 1903; M. A., University of Virginia, 1910; *Professor of English, Oklahoma Agricultural and Mechanical College, 1921—.*

- WILLIAM JASPER MILLER, E. E., University of Texas, 1915; S. M. E. E., Massachusetts Institute of Technology, 1922; *Professor of Electrical Engineering, Oklahoma Agricultural and Mechanical College, 1921—.*
- AVERY LUVERE CARLSON, B. A., State University of Iowa, 1911; Diploma in Education, *ibid.*, 1911; M. A., *ibid.*, 1915; J. D., University of Chicago, Law School, 1918; *Professor of Business Administration, Oklahoma Agricultural and Mechanical College, 1921—.*
- LEROY ALONZO WILSON, M. E., Cornell University, 1909; M. M. E., *ibid.*, 1914; *Professor of Mechanical Engineering, Oklahoma Agricultural and Mechanical College, 1921—.*
- PRESTON MURDOCH GEREN, B. S. in A. E., Agricultural and Mechanical College of Texas, 1912; *Professor of Architecture and Architectural Engineering, Oklahoma Agricultural and Mechanical College, 1921—.*
- RUTH DuBOIS, Diploma, Chautauqua School of Physical Education, 1920; A. B., University of Nebraska, 1921; *Professor of Physical Education for Women, Oklahoma Agricultural and Mechanical College, 1921—.*
- JOSEPH BENJAMIN PATE, Major, Infantry, United States Army; B. A., Maryville College, 1904; Graduate, United States Infantry and Cavalry School, Fort Leavenworth, Kansas, 1906; *Commandant and Professor of Military Science and Tactics, Oklahoma Agricultural and Mechanical College, 1921—.*
- JOSEPH HOWARD RUSTEMEYER, Captain, Infantry, United States Army; Graduate, Company Commanders' Course, Infantry School, Camp Benning, Georgia, 1921; *Professor of Military Science and Tactics, Oklahoma Agricultural and Mechanical College, 1921—.*
- JOSEPH JOHN SCHMIDT, Captain, Infantry, United States Army; Freemont College, (Nebraska), 1901; *Professor of Military Science and Tactics, Oklahoma Agricultural and Mechanical College, 1921—.*
- JOHN MARVIN HAGENS, Captain, Infantry, United States Army; New York University, 1912; *Professor of Military Science and Tactics, Oklahoma Agricultural and Mechanical College, 1921—.*
- ROBERT E. HARTSOCK, S. B., Harvard University, 1906; A. B., Kansas State Normal, 1909; Assistant Professor of Mathematics, Oklahoma Agricultural and Mechanical College, 1911-1912; Associate Professor of Mathematics, *ibid.*, 1912-1922; *Professor of Mathematics, ibid., 1922—.*
- SOLOMON LUTHER REED, A. B., Susquehanna University, 1908; A. M., *ibid.*, 1910; A. M., Yale University, 1911; Ph. D., *ibid.*, 1913; Assistant Professor of Education, Oklahoma Agricultural and Mechanical College, 1920-1921; Associate Professor of Education, *ibid.*, 1921-1922; *Professor of Education, ibid., 1922—.*
- JUDSON ALLEN TOLMAN, A. B., University of Chicago, 1901; A. M., *ibid.*, 1903; Ph. D., *ibid.*, 1911; *Professor of Ancient Languages, Oklahoma Agricultural and Mechanical College, 1922—.*

## ASSOCIATE PROFESSORS

- ROBERT OSCAR WHITENTON, A. B., University of Nashville, (Peabody College), 1906; M. S., University of Chicago, 1915; Assistant Professor of Zoology, Oklahoma Agricultural and Mechanical College, 1913-1915; *Associate Professor of Zoology, ibid., 1915—.*
- CARL POLLARD THOMPSON, B. S., Kansas State Agricultural College, 1904; M. S., Oklahoma Agricultural and Mechanical College, 1922; Assistant Professor of Animal Husbandry, *ibid.*, 1918-1919; *Associate Professor of Animal Husbandry, ibid., 1919—.*
- CLARENCE HAMILTON McELROY, B. S., Oklahoma Agricultural and Mechanical College, 1906; D. V. M., St. Joseph Veterinary College, 1919; Assistant Professor of Bacteriology and Veterinary Medicine, Oklahoma Agricultural and Mechanical College, 1909-1920; *Associate Professor of Bacteriology and Veterinary Medicine, ibid., 1920—.*
- JOHN EARL GUBERLET, B. A., Bethany College, (Kansas), 1909; M. A., University of Illinois, 1911; Ph. D., *ibid.*, 1914; Assistant Parasitologist for Experiment Station, Oklahoma Agricultural and Mechanical College, 1918; Parasitologist for Experiment Station, *ibid.*, 1919-1920; *Parasitologist, with rank of Associate Professor, for Experiment Station, ibid., 1920—.*
- ROBERT DuBOIS, B. A., Carleton College, 1918; M. S., Oklahoma Agricultural and Mechanical College, 1919; Assistant Professor of Chemistry, *ibid.*, 1919-1921; *Associate Professor of Chemistry, ibid., 1921—.*
- GRACE ALICE MOUNTCASTLE, Ph. B., University of Chicago, 1912; Instructor in English, Oklahoma Agricultural and Mechanical College, 1918-1919; Assistant Professor of English, *ibid.*, 1919-1921; *Associate Professor of English, ibid., 1921—.*
- AGNES BERRIGAN, B. A., University of Oklahoma, 1913; M. A., *ibid.*, 1914; *Associate Professor of English, Oklahoma Agricultural and Mechanical College, 1921—.*

- LOUISE PRITCHETT, B. S., Iowa State College, 1917; *Associate Professor of Domestic Science, Oklahoma Agricultural and Mechanical College, (Spring) 1922—.*
- ADRIAN DAANE, Ph. B., University of Wisconsin, 1913; M. S., *ibid.*, 1914; Assistant Agronomist and Assistant Professor of Agronomy, Oklahoma Agricultural and Mechanical College, 1914-1922; *Associate Professor of Agronomy, ibid.*, 1922—.
- FRED McCARREL, B. S., Oklahoma Agricultural and Mechanical College, 1916; M. S., *ibid.*, 1918; Assistant Professor of Education, *ibid.*, 1918-1922; *Associate Professor of Education, ibid.*, 1922—.
- WILLARD RUDE, Diploma, Gregg School, Chicago, 1918; Certificate, University of Wisconsin, 1919; Instructor in Business, Oklahoma Agricultural and Mechanical College, 1916-1920; Assistant Professor of Secretarial Training, *ibid.*, 1920-1922; *Associate Professor of Secretarial Training, ibid.*, 1922—.
- GLEN NEWTON BRIGGS, B. S., Oklahoma Agricultural and Mechanical College, 1916; M. S., *ibid.*, 1922; Assistant Professor of Agronomy, *ibid.*, 1921-1922; *Associate Professor of Agronomy, ibid.*, 1922—.
- ETHEL DAVIS, B. S., George Peabody College, 1920; Assistant Professor of Domestic Art, Oklahoma Agricultural and Mechanical College, 1921-1922; *Associate Professor of Domestic Art, ibid.*, 1922—.
- ARTHUR DEVRIES BURKE, B. S., University of Wisconsin, 1916; M. S. A., Ohio State University, 1920; Assistant Professor of Dairying, Oklahoma Agricultural and Mechanical College 1920; *Associate Professor of Dairying, ibid.*, 1922—.

## ASSISTANT PROFESSORS

- JAMES HENRY CALDWELL, Instructor in Mathematics, Secondary School, Oklahoma Agricultural and Mechanical College, 1912-1915; Assistant Professor of Mathematics, Secondary School, *ibid.*, 1915-1920; *Assistant Professor of History, College, ibid.*, 1920—.
- PAUL LYNN MENAUL, A. B., University of New Mexico, 1915; A. M., *ibid.*, 1917; Assistant Professor of Chemistry, Oklahoma Agricultural and Mechanical College, 1917-January, 1919; Assistant Research Chemist, Experiment Station, *ibid.*, January, 1919-1922; *Research Chemist, Experiment Station, ibid.*, 1922—.
- EWALD W. SCHUHMANN, A. B., University of Texas, 1913; A. M., *ibid.*, 1915; Instructor in Physics, Oklahoma Agricultural and Mechanical College, 1916-1918; *Assistant Professor of Physics, ibid.*, 1918—.
- EDWARD McCARREL, B. A., University of Oklahoma, 1916; Instructor in Mathematics, Secondary School, Oklahoma Agricultural and Mechanical College, 1907-1912; Assistant Professor of Mathematics, Secondary School, *ibid.*, 1918-1922; *Assistant Professor of Mathematics, College, ibid.*, 1922—.
- WILLIAM CAMPBELL PAYNE, B. S., University of Kentucky, 1904; *Assistant Professor of Mathematics, Secondary School, Oklahoma Agricultural and Mechanical College, 1919—.*
- HARRY WILLIAM ORR, D. V. M., Iowa State College, 1917; *Assistant Professor of Veterinary Medicine, Oklahoma Agricultural and Mechanical College, 1919—.*
- LLOYD KEITH COVELLE, Certificate, Central State Normal, 1915; Assistant Superintendent of Shops, Oklahoma Agricultural and Mechanical College, 1917-1918; *Assistant Professor in Shops, ibid.*, 1919—.
- EDWIN DORENCE SODERSTROM, Diploma, Stout Institute, 1912; Instructor in Department of Shop Practice, Oklahoma Agricultural and Mechanical College, 1917; *Assistant Professor in Shop Practice, ibid.*, 1919—.
- JOSEPH JULIAN PATTERSON, B. S. in Arch., University of Illinois, 1917; Instructor in Architecture, Oklahoma Agricultural and Mechanical College, 1917-1920; *Assistant Professor in Architecture, ibid.*, 1920—.
- ALBERT EDWARD DARLOW, B. S., Oklahoma Agricultural and Mechanical College, 1919; Instructor in Animal Husbandry, *ibid.*, 1919-1920; *Assistant Professor in Animal Husbandry, ibid.*, 1920—.
- ROBERT STRATTON, B. A., Miami University, 1915; M. A., Ohio State University, 1917; *Assistant Professor of Botany and Plant Pathology, Oklahoma Agricultural and Mechanical College, 1920—.*
- EMELIA MARIE SKARRA, Diploma, Chicago Normal School of Physical Education, 1920; *Assistant Professor of Physical Education for Women, Oklahoma Agricultural and Mechanical College, 1920—.*
- ELLIS C. BAKER, B. S. in M. E., Mississippi A. and M. College, 1911; *Assistant Professor of Mechanical Engineering, Oklahoma Agricultural and Mechanical College, 1921—.*

- EARL DAVID MARKWELL, B. S., Oklahoma Agricultural and Mechanical College, 1919; Instructor in Horticulture, *ibid.*, 1920-1921; *Assistant Professor of Horticulture, ibid.*, 1921—.
- HENRY FRED MURPHY, B. S., Oklahoma Agricultural and Mechanical College, 1918; Instructor in Agronomy, *ibid.*, 1920-1921; *Assistant Professor of Agronomy, ibid.*, 1921—.
- CHARLES LESLIE NICKOLLS, B. S., Dakota Wesleyan University, 1917; M. S., Oklahoma Agricultural and Mechanical College, 1921; Instructor in Chemistry, *ibid.*, (summer), 1921; *Assistant Professor of Chemistry, ibid.*, 1921—.
- THOMAS MALCOLM AYCOCK, B. S., Oklahoma Agricultural and Mechanical College, 1918; *Assistant Professor of Physical Education, ibid.*, 1921—.
- JAMES HAROLD MURDOUGH, S. B., Massachusetts Institute of Technology, 1916; *Assistant Professor of Civil Engineering, Oklahoma Agricultural and Mechanical College, 1921—.*
- MILLARD GEORGE HARNDEN, B. S., Oklahoma Agricultural and Mechanical College, 1917; *Assistant Professor of Agricultural Education, ibid.*, 1921—.
- MARY MARIE BAIRD, B. S., Kansas State Agricultural College, 1917; M. A., Columbia University, 1921; *Assistant Professor of Domestic Science, Oklahoma Agricultural and Mechanical College, 1921—.*
- WILLIAM EDGAR JACKSON, B. S., Oklahoma Agricultural and Mechanical College, 1914; M. S. *ibid.*, 1916; Graduate Assistant Entomologist, Oklahoma Agricultural and Mechanical College, 1914-1916; *Assistant Entomologist, ibid.*, 1916-1917; *Assistant Professor of Entomology, ibid.*, 1921—.
- BIRDIE VORHIES, Ph. B., University of Chicago, 1918; *Assistant Professor of Domestic Science, Oklahoma Agricultural and Mechanical College, 1921—.*
- WILLIAM AMBROSE RADSPINNER, B. S., Purdue University, 1919; M. S., Iowa State College, 1921; *Assistant Professor of Horticulture, Oklahoma Agricultural and Mechanical College, 1921—.*
- JOSEPH DEWEY STAFFORD, B. S., Oklahoma Agricultural and Mechanical College, 1920; Instructor in Vocational Agriculture, *ibid.*, 1921-1922; *Assistant Professor of Rural Economics and Sociology, ibid.*, 1922—.

## INSTRUCTORS

- JANE PORTER SLOSS, Graduate in Piano. Logan College, 1895; Student of New England Conservatory, 1896-1897; *Instructor in Piano, Oklahoma Agricultural and Mechanical College, 1913—.*
- FRANK RUSSELL BRADLEY, Special E. E. Student, Kansas State University; Shop Instructor and Repair Man, Oklahoma Agricultural and Mechanical College, 1910-1916; *Instructor in Shops, ibid.*, 1917—.
- DAISY DELL McCOOL, Diploma, Chicago Art Institute, 1917; Instructor in Art, Oklahoma Agricultural and Mechanical College, 1918-1921; *Instructor in Art, and Acting Head of Art Department, ibid.*, 1921—.
- ALICE TRAVER, B. S., Oklahoma Agricultural and Mechanical College, 1922; *Instructor in Secondary School, ibid.*, 1918—.
- PHILIP ARMOUR WILBER, B. S., Oklahoma Agricultural and Mechanical College, 1919; *Instructor in Architecture, ibid.*, 1919—.
- MARY ELEANOR LOCKWOOD, A. B., Baker University, 1911; Acting Head of Foreign Language Department, Oklahoma Agricultural and Mechanical College, 1919-1920; *Instructor in Modern Languages, ibid.*, 1920—.
- FRED J. BEARD, B. S., Oklahoma Agricultural and Mechanical College, 1920; *Instructor in Vocational Animal Husbandry, ibid.*, 1920—.
- FRANK HLADKY, Jr., Graduate of J. F. Franta Violin School, Nebraska; Student of Frank Justa, Lincoln, Nebraska; *Instructor in Violin and Head of Violin Department, Oklahoma Agricultural and Mechanical College, 1920—.*
- LEONA KATHERINE SIEGLINGER, B. S., Oklahoma Agricultural and Mechanical College, 1919; Assistant in Physics, *ibid.*, 1910-1920; *Instructor in Physics, ibid.*, 1920—.
- ELIZABETH KATHERINE MOREHARDT, Diploma, New England Conservatory of Music, 1918; *Instructor in Voice, Oklahoma Agricultural and Mechanical College, 1920—.*
- ANNIE GARNER THORNTON, *Instructor in Secondary School, Oklahoma Agricultural and Mechanical College, 1920—.*

- \*CHARLES MEEKS ANDERSON, B. A., Johnson Bible School, 1916; M. A., University of Michigan, 1918; *Instructor in Economics, Oklahoma Agricultural and Mechanical College, 1921—.*
- MABEL DAVIS HOLT, B. S., Oklahoma Agricultural and Mechanical College, 1921; *Instructor in Secondary School, ibid., 1921—.*
- BENJAMIN CICERO DYESS, Diploma, North Texas State Normal College, 1911; *Instructor in Mathematics, Secondary School, Oklahoma Agricultural and Mechanical College, 1921—.*
- RUFUS QUITMAN GOODWIN, B. S., Oklahoma Agricultural and Mechanical College, 1921; *Instructor in Secondary School, ibid., 1921—.*
- CHARLES VICTOR BULLEN, B. S. in E. E., University of Texas, 1920; *Instructor in Electrical Engineering, Oklahoma Agricultural and Mechanical College, 1921—.*
- ISABELLE MILLIGAN STORY, B. S., George Peabody College, 1917; *Instructor in Domestic Art, Oklahoma Agricultural and Mechanical College, 1921—.*
- MARGARET STEVENS STERN, B. S., Oklahoma Agricultural and Mechanical College, 1914; *Instructor in Domestic Science, ibid., 1921—.*
- JOHN WILSON BRIGHAM, Oberlin Conservatory; *Instructor in Voice and Head of Voice Department, Oklahoma Agricultural and Mechanical College, 1921—.*
- HARRIET RUBY ENSWORTH, Ph. B., University of Chicago, 1919; *Instructor in English, Secondary School, Oklahoma Agricultural and Mechanical College, 1919-1922; Instructor in English, College, ibid., 1922—.*
- MABEL CALDWELL, B. S., Oklahoma Agricultural and Mechanical College, 1918; *Instructor in Secondary School, ibid., 1922—.*
- MABEL POLK, Chicago Art Institute; Fine Arts School, Chicago; School of Fine and Applied Art, New York; *Instructor in Art, Oklahoma Agricultural and Mechanical College, 1922—.*
- THAMAZIN HUTCHINS, B. M., University of Oklahoma, 1918; *Instructor in Piano, Oklahoma Agricultural and Mechanical College, 1922—.*
- DANIEL L. HUFFMAN, B. M. in Piano and Organ, Oberlin Conservatory of Music, 1918; *Instructor in Piano and Head of Piano Department, Oklahoma Agricultural and Mechanical College, 1922—.*
- FLOYD Z. BEANBLOSSOM, B. S., Oklahoma Agricultural and Mechanical College, 1922; *Assistant in Poultry Husbandry, ibid., 1922—.*
- SYLVAN R. WOOD, B. S., Oklahoma Agricultural and Mechanical College, 1920; *Instructor in Chemistry, ibid., 1922—.*
- JOHN M. WALLACE, *Instructor in Secondary School, Oklahoma Agricultural and Mechanical College, 1922—.*
- EDGAR R. LAWRENCE, B. S., Oklahoma Agricultural and Mechanical College, 1922; *Instructor in Vocational Agriculture, ibid., 1922—.*
- CHARLES W. UPP, B. S., Oklahoma Agricultural and Mechanical College, 1922; *Instructor in Vocational Agriculture, ibid., 1922—.*
- GROVER AVERY BRIGGS, B. S., Oklahoma Agricultural and Mechanical College, 1921; *Instructor in Secondary School, ibid., 1922—.*

## SPECIALS

- JOHN FREDERICK MAULBETSCH, B. S., University of Michigan, 1916; *Coach of Football, Basketball and Baseball, Oklahoma Agricultural and Mechanical College, 1921—.*
- ROY WASHINGTON KENNY, B. S., Oklahoma Agricultural and Mechanical College, 1920; *Assistant Coach of Athletics, ibid., 1920—.*
- CHRISTIAN JENSEN, Diploma, Naestved Technical School, Denmark, 1886; Graduate Biltmore Forestry School, N. C., 1905; Superintendent of Green House and Landscape Gardener, Oklahoma Agricultural and Mechanical College, 1914-1922; *Assistant in Horticulture and Forestry and Landscape Gardener, ibid., 1922—.*

\*On leave of absence.

## COLLEGE ADMINISTRATION

(Listed in Point of Priority)

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JAMES BURNETTE ESKRIDGE, A. M., Ph. D., University of Chicago; *President.*

LOWERY LAYMON LEWIS, B. S. A., M. S., D. V. M.; *Dean of the Faculty, Dean of the School of Science and Literature, Dean of the School of Veterinary Medicine.*

HERBERT PATTERSON, A. B., A. M., Ph. D.; *Dean of the School of Education, Director of the Summer School.*

MALCOLM ALFRED BEESON, B. S., D. Sc.; *Dean of the Division of Agriculture, Dean of the School of Agriculture.*

HENRY FULLER HOLTZCLAW, A. B., Ph. D.; *Dean of the School of Commerce and Marketing.*

RICHARD GAINES TYLER, C. E., S. B. in C. E.; *Dean of the School of Engineering.*

ELLA NORA MILLER, B. S., M. S.; *Dean of the School of Home Economics.*

WILLIAM AMMON CONNER, B. S.; *Director of Extension.*

CARL THOMAS DOWELL, B. A., B. S., Ph. D.; *Director of the Experiment Station.*

MARY CATHERINE BROGDON, B. A., M. A.; *Dean of Women.*

JAMES ROBERT CAMPBELL, B. A., M. A.; *Dean of the School of Correspondence-Study.*

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EDWARD JOHNSTON WESTBROOK; *Superintendent of the Printing Department.*

MICHAEL McDONALD, Sergeant Major, U. S. Army, Retired; *Quartermaster.*

CHARLES ALFRED POFFENBERGER, Houston Business College; *Registrar and Secretary to the Faculty.*

MONROE JOB OTEY, B. S., Oklahoma Agricultural and Mechanical College, 1902; *Financial Secretary and Purchasing Agent.*

CHARLES DUDLEY SIMMONS, M. D., Louisville Medical College, 1891; New York Postgraduate Medical School, 1903; Kansas City General Hospital, 1912; *College Physician.*

CHARLES CALDWELL PORTER, *Assistant to the Financial Secretary.*

BENJAMIN BANKS, *Steward, College Dining Hall.*

EDGAR ELI BREWER, *Superintendent of Campus and Buildings.*

CHARLES EVANS, B. S., Lebanon (Ohio) University, 1890; A. M., University of Kentucky, 1911; LL.D., *ibid.*, 1915; *Director of Educational Extension.*

EARLE CLARENCE ALBRIGHT, *Secretary to the President.*

ELSIE D. HAND, *Librarian.*

WALLACE PERRY, B. A., University of Oklahoma, 1907; *Editor of College Publications.*

ODOM FARRELL SULLIVAN, B. S. E., University of Arkansas, 1920; *Secretary of the Young Men's Christian Association.*

## CLERKS AND STENOGRAPHERS

MARGARET RAY BEARD, *Executive Clerk of Experiment Station.*

ALBERT LEE WRIGHT, *Order Clerk, Financial Secretary's Office.*

LEONA JEWELL BERRY, *Assistant to the Registrar.*

GLADYS HUGHES-KELLY, *Assistant to the Registrar.*

HORACE A. ANDREWS, *Bookkeeper, Financial Secretary's Office.*

ETHEL PROSSER, *Bookkeeper, Financial Secretary's Office.*

EDITH BUFFINGTON, B. S., Oklahoma Agricultural and Mechanical College, 1918; *Stenographer, Department of Horticulture.*

ANNA BOWERS ELLIOTT, *Stenographer to the Dean of Agriculture.*

RUTH COX, *Stenographer, School of Correspondence-Study.*

FERN RUST, *Stenographer, Agronomy and Animal Husbandry Departments.*

FAYE SMART, *Stenographer, School of Engineering.*

JOSEPH POLLARD, *Bookkeeper, Dairy Department.*

RUFUS JAMES PEDERSON, *Stenographer to the President.*

GLADYS HUNTER, *Typist, Financial Secretary's Office.*

ELIZABETH OPAL JOHNSON, *Student Assistant Stenographer, President's Office.*

## STANDING COMMITTEES

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ADMISSION: Kezer, chairman; Herbert Patterson, Powell, Poffenberger.

ADVANCED STANDING: Holtzclaw, chairman; Deans of Schools, Chambers.

AFFILIATED SCHOOLS: Edward McCarrel, chairman; Caldwell, Berrigan.

BOARDING AND ROOMING HOUSES: Caldwell, chairman; Brogdon, Hunt, McElroy.

CAFETERIA: Otey, chairman; Ella Nora Miller, McCool.

CATALOG AND COLLEGE PUBLICATIONS: Perry, chairman; Deans of Schools, Director of Extension, Director of Experiment Station.

COLLEGE GOVERNMENT: Kezer, chairman; Beeson, Fred McCarrel, Brogdon.

CONVOCATIONS: Hartsock, chairman; Makovsky, Ella Nora Miller.

CORRESPONDENCE SCHOOL: Campbell, chairman; Deans of Schools.

COURSES OF STUDY: Lewis, chairman; Deans of Schools.

DORMITORIES: Beeson, chairman; Brogdon, Parks.

FORENSIC: Martin, chairman; Caldwell, Powell.

GRADUATE COURSES: Eskridge, chairman; Holtzclaw, Tolman, Parks, Sanborn.

LIBRARY: Tolman, chairman; Deans of Schools, Hand.

LITERARY SOCIETIES: Powell, chairman; Mountcastle, Arnold, Martin.

REGISTRATION MATTERS: Poffenberger, chairman; Deans of Schools.

RULES AND REGULATIONS: Parks, chairman; Kezer, Brogdon.

SCHEDULE: Hartsock, chairman; Parks, McElroy.

STUDENT LABOR: Otey, chairman; Lewis, Beeson, Tyler.

STUDENT PLAYS AND SOCIAL ENTERTAINMENT: Fred McCarrel, chairman; Martin, Brogdon.

TEXTBOOKS: Gundersen, chairman; Parks, Carlson, Ella Nora Miller.

The President of the College is ex-officio a member of all committees.

## GENERAL INFORMATION



## GENERAL INFORMATION

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The Oklahoma Agricultural and Mechanical College and Agricultural Experiment Station was located and established by an act of the First Territorial Legislative Assembly, this act becoming effective December 25, 1890. A locating board was appointed June 1, 1891, to secure a site for the College and on July 11 this board reported back to the Governor that the College had been located on 200 acres of ground immediately adjoining the City of Stillwater.

The Board of Regents appointed by the Governor held its first meeting in Guthrie June 25, 1891, and elected R. J. Barker president of the Board and A. A. Ewing, treasurer. On August 14, 1891, R. J. Barker was elected president of the College and Dr. J. C. Neal was elected director of the Experiment Station. The College was formally opened December 14, 1891, in the Congregational Church in Stillwater with an attendance of forty-five students.

The first College building was completed and formally dedicated June 14, 1894. From the first the character of the work of the College and its place in the development of the State has been emphasized. After the election of the President and Director, the first teaching member of the faculty selected was a professor of agriculture, A. C. Magruder, who was elected professor of Agriculture and Horticulture November 25, 1891. The various lines of work of the new institution were soon outlined and provided for. Work in Chemistry was provided for in February, 1892. Horticulture as a separate department was provided for in 1893, Engineering in 1896, Home Economics in 1900, Education in 1913, and Commerce and Marketing in 1914.

All of the major work of the College that at the beginning was organized as departments with one teacher has grown in importance and strength until now the work of the College is organized as Schools with deans and corps of teachers to handle the special work of the separate divisions.

*LAWS CONCERNING THE COLLEGE*

The A. and M. College owes its origin to a bill offered by United States Senator Morrill of Vermont in 1862, which provides funds for one such institution of learning in each State of the Union, and sets aside certain public lands from which endowments have come to each of these State and Federal Colleges. Therefore these institutions are known as "The Land Grant Colleges."

This Act of Congress, approved July 2, 1862, gave to each State which accepted its provisions 30,000 acres of government land for each of its representatives in Congress, the proceeds to be applied to the endowment and maintenance of colleges

"Where the leading subject shall be, without excluding the other scientific and classic studies, and including military tactics, to teach such branches of learning as are related to agriculture and mechanic arts, - - - in order to promote the liberal and practical education of the industrial classes in the various pursuits and professions of life."

Again in 1887, Congress provided for an Agricultural Experiment Station in connection with each of the Land Grant Colleges:

"That in order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture and to promote scientific investigation and experiments respecting the principles and application of agricultural science, there shall be established under the direction of the College in each State and Territory, established - - - in accordance with an - - - Act donating public land to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts' - - - a department to be known and designated as an "Agricultural Experiment Station'."

The first legislature of the Territory of Oklahoma adopted a resolution assenting to and accepting the provisions of Congress and established the Oklahoma Agricultural and Mechanical College in Payne County, at Stillwater, December 25, 1890.

In the Enabling Act granting statehood to Oklahoma, Congress also provided 250,000 acres of public land as a permanent endowment for the College.

The Oklahoma Constitution provides that the State Board of Agriculture shall be the Board of Regents of the A. and M. College in the following:

"Said Board (of Agriculture) shall be maintained as a part of the State Government and shall have jurisdiction over all animal quarantine regulations and shall be the Board of Regents of all State Agricultural and Mechanical Colleges."

The Oklahoma Constitution is the only State Constitution recognizing the fundamental importance of agriculture and domestic science. It declares that—

"The Legislature shall provide for the teaching of agriculture, horticulture, stock-feeding and domestic science in the common schools of the State."

According to the laws of Oklahoma *"The Agricultural and Mechanical College shall be the technical head of the Agricultural, Industrial and allied Science system of education in Oklahoma."*

In 1914 Congress passed the Smith-Lever Bill, which provides:

"That in order to aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics, and to encourage the application of the same, there may be inaugurated in connection with the college or colleges in each State . . . agricultural extension work which shall be carried on in cooperation with the United States Department of Agriculture . . . That cooperative agricultural extension work shall consist of the giving of instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in said colleges in the several communities, and imparting to such persons information on said subjects through field demonstrations, publications, and otherwise; and this work shall be carried on in such manner as may be mutually agreed upon by the Secretary of Agriculture and State agricultural college or colleges receiving the benefits of this Act."

Through the acceptance of the terms of this Act by the Oklahoma State Legislature at the following session, the Agricultural and Mechanical College became the head of such cooperative extension work in Oklahoma.

The Reserve Officers' Training Corps unit of the College is organized and maintained by authority of the President of the United States under the National Defense Act of June 3, 1916, as amended by the Army Reorganization Act of June 4, 1920, providing that:—

"Sec. 33. That said Act be, and the same is hereby, amended by striking out sections 40, 41, 42, 43, 45 and 46 and inserting the following in lieu thereof:

"Sec. 40. RESERVE OFFICERS' TRAINING CORPS— ORGANIZATION.— The President is hereby authorized to establish and maintain in civil educational institutions a Reserve Officers' Training Corps, one or more units in number, which shall consist of a senior division organized at universities and colleges granting degrees, including state universities and those state institutions that are required to provide instruction in military tactics under the act of Congress of July 2, 1862, donating lands for the establishment of colleges where the leading object shall be practical instruction in agriculture and the mechanical arts, including military tactics, etc."

The Sixty-Fourth Congress passed what is known as the Smith-Hughes Bill, entitled:

"An Act to provide for the promotion of vocational education; to provide for cooperation with the State in the promotion of such education in agriculture and the trades and industries; to provide for cooperation with the States in the preparation of teachers of vocational subjects; and to appropriate money and regulate its expenditures."

### SOURCES OF REVENUE

The Agricultural and Mechanical College derives support from both Federal and State Governments:

1. A fund derived from the United States Government, known as the "Morrill Fund." This fund can be expended only for instruction of students in literature, languages and the sciences

and to train school teachers in the principles of agriculture and home economics.

2. The United States Government funds for investigation of scientific and agricultural matters of importance to farmers, and for publishing the results of such tests and experiments, known as the Hatch and Adams Funds. These support the Oklahoma Agricultural Experiment Station.

3. A fund derived from the rentals of public lands donated by Congress to the Oklahoma A. and M. College under the Enabling Act granting statehood to Oklahoma, known as the "Land Lease Fund." This fund may be used for operating expenses of the College proper.

4. A fund appropriated annually or biennially by the State for buildings, repairs and extensions to the permanent equipment of the A. and M. College.

5. The Smith-Lever Bill, adopted by the Sixty-Third Congress, provides increasing support for cooperative agricultural extension work for a period of ten years, when the permanent basis of this support is reached. This fund is dependent upon cooperative support by the State and is available only for agricultural extension work.

6. An allowance established by an Act of Congress organizing the Reserve Officers' Training Corps, and which provides pay and uniforms to certain military students under prescribed restrictions.

7. The Smith-Hughes Fund, established by the Sixty-Fourth Congress, providing support for the training of teachers of vocational agriculture and home economics.

#### *FOURFOLD SERVICE TO STATE*

The service rendered by the institution is represented by four divisions:

(1) The College proper for resident instruction.

The function of the College is to educate and train students in the sciences which relate to industry, and in such other subjects as will give a broad and liberal education, as a means of developing character, increasing efficiency, and assuring a high standard of citizenship.

The College comprises thirty-seven departments, organized under seven different schools, which offer distinct courses of instruction to those who apply for graduation.

(2) The Agricultural Experiment Station.

Under Act of Congress of 1889, known as the Hatch Act, an agricultural experiment station has been established to carry forward investigations in agriculture of a research or experimental nature, to learn and make known such facts as may be of importance to the farmers of the State. Through the agency of the Agricultural Experiment Stations establish in the various states and the United States Department of Agriculture, agriculture has become a well established science as well as an art.

(3) The Extension Division.

Under Act of Congress of 1914, known as the Smith-Lever Act, cooperative extension work has been established in connection with the Agricultural College, whose function is to instruct citizens of the State, who are not residents of the College, in the best proven methods of economic agriculture and home economics.

(4) The School of Correspondence-Study.

To extend the opportunities of a general education to those men and women and boys and girls who are unable to attend College is the purpose of the School of Correspondence-Study, recently established. More than 150 courses of study, prepared by regular members of the faculties of the different schools and representing almost every department in the College, are offered and credit is given the same as if the courses were taken in residence at the College.

An enrollment fee of \$2 per credit hour is charged for correspondence courses.

*ORGANIZATION OF THE COLLEGE*

The College proper comprises the following schools and departments:

The School of Agriculture, including,

The Department of Agronomy,

The Department of Animal Husbandry,

The Department of Agricultural Education,

The Department of Dairy Husbandry,

The Department of Entomology,

The Department of Horticulture,

The Department of Poultry Husbandry,

The Department of Rural Engineering,

The Department of Rural Economics and Sociology.

The School of Engineering, including,

The Department of Architecture and Architectural Engineering.

The Department of Chemical Engineering,

The Department of Civil Engineering,

The Department of Electrical Engineering,

The Department of Mechanical Engineering,

The Department of Shops.

The School of Home Economics.

The School of Science and Literature, including,

The Department of Art,

The Department of Ancient Languages,

The Department of Bacteriology and Zoology,

The Department of Botany,

The Department of Chemistry,

The Department of English,

The Department of History,

The Department of Mathematics,

The Department of Modern Languages,

The Department of Music,

The Department of Physical Education,

The Department of Physics,

The Department of Speech.

The School of Education, including,

The Department of Educational Administration,

The Department of Educational Methods,

The Department of Educational Philosophy,

The Department of Educational Psychology.

The School of Commerce and Marketing, including,

The Department of Commerce,

The Department of Economics,

The Department of Marketing,

The Department of Secretarial Training.

The School of Veterinary Medicine.

The Department of Military Science and Tactics.

#### *BUILDINGS AND EQUIPMENT*

The first building of the College plant to be constructed was Old Central, which was completed in 1894. Buildings have been added from time to time since that date until at the present time

there are twenty-two buildings, twelve classed as major buildings and ten as minor buildings. In addition to these there are many smaller, subsidiary structures such as residences, bleachers, grandstand, memorials and barns. The campus consists of 80 acres of comparatively level ground located in the northwestern part of Stillwater and admirably situated topographically and otherwise for the purpose for which it is used. The College farm is a tract of 920 acres, immediately adjoining the campus on the west. It is well drained and suitable for farming and stock raising purposes. The present valuation of the College plant is \$2,004,733.

Following are the important buildings and structures on the campus:

**Morrill Hall.**—This is a three-story building of brick and stone construction, 76x166 feet, which was erected in 1906, at a cost of \$74,600. By an Act of the Legislative Assembly providing for its construction it was named in honor of Senator Justin S. Morrill. In it are located the administrative and business offices of the College and the School of Agriculture, with the laboratories and lecture rooms for the departments of Aronomy, Animal Husbandry, Horticulture, Botany, Entomology, Rural Economics and Poultry. The Extension Division, the School of Correspondence-Study and the College Post Office also are located in this building.

**Engineering Building.**—This building was erected in 1912 at a cost of \$75,000. It is three stories in height and covers 160x80 feet. It is of reinforced concrete and brick construction. On the ground floor are located the steam and hydraulic laboratories and boiler room, the electric laboratories, civil engineering laboratories for testing cement, masonry, steel and road materials; also rooms for surveying instruments, storage batteries, standardizing room, men's locker room, and Dean's office. On the next floor are the physical laboratories and lecture rooms, together with the electrical engineering departmental offices and lecture rooms, wireless room, room for phorometry, and women's lockers. On the top floor are the Departments of Architectural and Mechanical Engineering, consisting of offices, lecture rooms, library and reading rooms, large drafting rooms, and blue print rooms.

**New Gymnasium.**—This building is constructed of brick with reinforced concrete framework and was erected in 1919 to be used as gymnasium and armory at a cost of \$124,280. It has an

outside measurement of 176x108 feet and is two stories in height, with a balcony. The central part of the building is used for a gymnasium; the west wing for the armory and offices of the military department, and the east wing for a swimming pool, 61x29 feet. The second floor of the gymnasium, which is used by classes in physical education for men and by varsity and class teams in basketball, wrestling, and gymnastics and is a place for many student social activities, is 115x88 feet. The floor and walls are equipped with modern gymnasium apparatus. A balcony used as a running track, as well as a seating space for spectators, extends around and above the floor. On the lower floor are locker rooms for classes and members of the varsity athletic teams, dressing rooms, shower baths, and equipment rooms. Headquarters of the departments of physical training and athletics are in offices on the first floor.

**Auditorium.**—This building, which is constructed of brick with reinforced concrete framework, was erected in 1912 at a cost of \$84,000. It has a sloping floor, large balcony, roomy stage with dressing rooms and accessories, and a seating capacity of 2,500.

**Chemistry Building.**—In 1919 the new Chemistry building was constructed at a cost of approximately \$121,190. This is a three-story building, 108x80 feet in plan, and is of brick with reinforced concrete framework. It contains the offices, lecture rooms and laboratories for inorganic and organic chemistry, petroleum technology and chemical engineering, together with lecture rooms used by the Department of English.

**Home Economics.**—This building, which is of brick with reinforced concrete framework, was completed in January, 1921, at a cost of \$110,000. The building covers an area of 64x132 feet and is three stories in height. On the first floor are six offices in use by the School of Home Economics, a library and reading room well furnished and lighted, a large dining room fully equipped for service of all kinds, a large lunch room used especially in teaching lunch room work, store room, pantry, kitchenette, textile testing laboratory, large laundry and a large locker room. On the second floor there are several large food laboratories, sewing laboratories, and a nutrition laboratory with experimental kitchen. The third floor contains offices, lecture rooms, drafting rooms for the Art Department, rest room, and laboratories for costume designing and home nursing. The equipment

throughout is modern in every respect and is adapted to the uses of the various lines of work offered in the several departments of the School.

**Library.**—This is a two-story brick building, costing \$115,000, and completed in 1921. It is 65x137 feet in plan. The first floor contains class or reference rooms, offices of the School of Education, and store and work rooms. The second or main floor is used as the general reading room and also contains the offices of the librarian and assistant librarian and a catalog room. Over the center of the main reading room a lantern or clear story is built which adds much to the lighting of the main room, which has large windows on two sides. The stack room extends across the entire west end of the building and has an area of 24x65 feet, on which the stacks are arranged in four tiers or stories.

**Biology Building. (Old Library)**—This building is a brick and stone construction and was erected in 1901 at a cost of \$43,400. It is two stories in height, in addition to a basement. It covers an area of 72x76 feet with a wing 111x65 feet. In it are located the offices of the School of Veterinary Medicine and Science and Literature with the lecture rooms and laboratories of the Departments of Bacteriology and Zoology, Physiology, Ancient and Modern languages and various lecture rooms used by other departments. The wing contains the College Print Shop and the College Book Store.

**Woman's Building.**—This building is of brick and stone construction 146x78 feet in plan and was erected in 1910 at a cost of \$62,000. It contains rooms for women students together with a gymnasium for women, reception halls and office of the Dean of Women. The rooms are electric lighted and steam heated, and various floors are equipped with laboratories and baths.

**Crutchfield Hall (Men's Dormitory).**—This building, which is of brick construction, is 132x38 feet in plan and was erected in 1910 at a cost of \$25,000. It is three stories in height and equipped with all modern conveniences.

**Central Building.**—This is the first building erected upon the campus of the college. It is a two story brick and stone building with basement, 66x60 feet in plan and was completed in 1894, at a cost of \$25,000. It is used for offices by the Secondary School and department of Mathematics and by the various College publications.

**Cafeteria.**—This building, which is of brick construction, is 72x38 feet in plan with a wing 180x40 feet. It was erected in 1909 at a cost of \$12,000. On the main floor is located a cafeteria for the use of faculty and students, while on the second floor is the Quartermaster's Department of the R. O. T. C.

**Business Building.**—This building is of brick and stone construction 80x48 feet in plan with two stories and a basement. It was erected in 1902 at a cost of \$8,000, to house the Engineering Department, but is now occupied by the School of Commerce and Marketing and the Department of Music.

**Rural Engineering Building.**—This building, which is 116x52 feet in plan with an L 64x31 feet, was erected in 1910 for a livestock judging pavillion at a cost of \$15,200. It is a two-story brick structure and in it is located the Department of Rural Engineering. Part of this building has been converted into a dormitory for men.

**Vocational Building.**—This building was erected in 1898 at a cost of \$12,000, for the use of the Chemistry Department. It is a two-story brick structure with basement. The main portion of the building is 64x42 feet with a wing 54x42 feet. It has been remodeled and contains the office of the Co-ordinator for Federal Students and the offices and laboratories of the Agricultural Experiment Station, together with various lecture rooms.

**Shop Building.**—This Building, which is of stone and brick construction, was erected in 1912 at a cost of \$4,420. It is 40x200 feet, and, for a depth of 80 feet, is two stories high; the remainder is one story. This building provides accommodations for the carpenter, machine and blacksmith shops and foundry, and has up-to-date tool rooms and equipment.

**Creamery Building.**—This building is of brick construction, two stories in height. It was erected in 1904 at a cost of \$7,900. The main portion of the building is 60x30 feet, two stories in height, and a one story addition is 50x32 feet. It contains classrooms and laboratories for the Dairy Department, and a commercial creamery for experimental and instructional purposes.

**Power and Heating Plant.**—The power and heating plant, which is of brick construction with concrete frame work, was erected in 1912 at a cost of \$40,000. It is 129x48 feet in plan and furnishes heat, light and power for all college buildings and shops.

**Poultry Building.**—The main building for laboratory and classrooms was erected in 1912 at a cost of \$3,000. In addition to the main building there are a score or more of colony houses and a long laying house, and complete equipment for research and teaching.

**Greenhouse.**—The Greenhouse was erected in 1909 at a cost of \$5,000. This building is in charge of the Department of Horticulture and is used for instructional research work.

**Apiary and Insectary.**—This building is of wood construction, 60x20 feet in plan, and was erected in 1913 at a cost of \$1,936. It houses laboratories for the Department of Entomology. A cupola is provided with a modern insect trap to aid in the study of winged insects.

There are at present six barns, which may be enumerated as follows:

**Dairy Barn,** recently completed at a cost of \$32,000. It is of fireproof construction and modern in every respect and has a capacity for eighty cattle.

**Brick Barn,** 60x90 feet, originally costing \$7,500, is used for the housing of the horse herd.

**Beef Cattle Barn,** originally costing \$8,000, houses the beef cattle.

**Sheep Barn,** originally costing \$8,000.

**Hog Barn,** costing \$1,000.

**Veterinary Barn,** which also contains laboratories used by the Veterinary Department, originally costing \$2,400.

Besides these barns, there are on the Agronomy farm, a seed house and two barns, used for housing work stock.

**Residences.**—Residences are provided for the President, Home Economics Home Builders' practice, the superintendent of the green house and campus, foreman of the college farm, foreman of the agronomy experimental farm, and superintendent of agronomy experimental farm.

#### LIBRARY

The new Library Building is built of brick and stone, and is designed in harmony with the newer structures on the campus in a modification of Italian Renaissance.

The first floor contains lecture rooms and offices, together with the smaller rooms in connection with the well-equipped library. This floor is reached by two secondary entrances on the

south side. A broad flight of stairs on the east end of the building leads to the loggia with its imposing Palladin motif. From here an interior stair brings one to the library floor with its great central reading room, surrounded by six smaller special divisions, set off by columns. A superstructure above the center admits light to the main reading room, and adds height and dignity to the interior.

The delivery desk, catalog room, and offices in the west end of the building connect directly with the stack-room. This runs the entire height of the two floors, and is divided into four stories by light steel stacks and runways.

There are now 38,000 bound volumes in the library. There are more than 90,000 unbound pamphlets, which are arranged and classified for quick reference work. In addition the library possesses more than 50,000 unbound periodicals which are rapidly being bound. The library receives about 400 of the leading newspapers and periodicals of the United States. Large dailies are kept on the newspaper racks for the use of the students, and most of the magazines indexed in the Reader's Guide are on the shelves.

The library is a depository for U. S. Public Documents and receives practically all material printed by the Government. The files of the U. S. Department of Agriculture and the publications of the Experiment Station are nearly complete.

There are several departmental libraries located in the various buildings for use of students taking work in the respective departments.

Purpose.—It is the purpose of the Librarian not only to supplement the work of every department, but also to make the library the center of all literary activities of the College. Every effort is made to assist the students in the use of reference books, catalogs and indexes, and to familiarize themselves with the best books and use of bibliographies.

Occasional lectures are given to regular and short course students in order to make the best use of the library equipment. Emphasis is laid upon the card catalog, periodical indexes, bibliographies and guides, and the large collection of United States Department of Agriculture and Experiment Station literature.

Valuable Gifts.—The library has been enriched by the gift from the Carnegie Institution of Washington of all its publications,

and also by the studies from the Rockefeller Institute of Medical Research. Each of these great institutions has placed the library on the "Omnia List." Other valuable gifts include several thousand periodicals and several thousand books.

**Regulations.**—Books may be drawn for a period of two weeks by all of the officers and students of the College, and by others having special permission. General reference, reserve books, periodicals and dictionaries must be consulted in the reading room, and not drawn from the library. Citizens and visitors, whether connected with the College or not, are invited to make free use of the reading and reference room, and assistance in reference work gladly will be given them.

The library is kept open until ten o'clock in the evening.

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## STUDENT EXPENSES

### *FEES AND DEPOSITS*

A fee of \$2.50 per quarter is charged all students who take typewriting. This covers breakage and wear on equipment.

A fee of \$9 per quarter is charged if individual lessons in music are given; class instruction is free. Pianos will be furnished five hours per week for approximately \$3 per quarter.

A fee of \$3 is charged all students each quarter for a Student Activity Ticket.

A deposit of \$2.50 covering breakage, etc., in all laboratory departments, is required.

### *BOARD AND ROOM*

Furnished rooms in the Woman's Building or in the Men's Dormitory, including light, heat and water, two students occupying each room are furnished for \$3 per month, payable in advance. Applications for dormitory accommodations should be made to the registrar one quarter before arriving at the college. Those occupying rooms in the dormitories must furnish towels, bed linens, curtains and covers. The dormitory buildings contain bath rooms, electric irons and washers, and all necessary facilities. The rooms are thoroughly sanitary and are heated by steam and lighted by electricity.

Board in the College Cafeteria is provided on the meal plan at actual cost. The student pays for what he selects, and the cost per student varies according to the amount he eats. The

cafeteria provides opportunity for the larger menu from which to choose, and in general is more satisfactory than the plan of having the table set and no choice.

Board with room in private families may be obtained at a cost of \$6 to \$7 per week. Furnished room \$10 to \$12 per month if two occupy a room, more if occupied by a single individual.

#### *APPROVED ROOMING HOUSES*

Comfortable and desirable homes in Stillwater are listed as "approved rooming houses" for non-resident students. This work is under the supervision of the faculty committee on the board and rooming houses. Students are not permitted to room in any other than approved rooming houses. One of the requisites of an approved rooming house is that it should keep either men or women, and not both men and women in the same house.

#### *OTHER EXPENSES*

The total cost of a student attending the College embraces the items of books, board, and incidental expenses. These may be estimated at \$350 to \$450 for the nine months. Students may reduce this expense by working part time if they care to, or one's expense account may be kept within reason by judicious purchasing.

Amount required to begin, approximately:

Board and room, 3 months (dormitory and cafeteria) .....	\$75.
Books .....	12.
Incidentals .....	15
Total .....	<u>\$102.</u>

The books used by the College students are secured from the College book store at cost. This eliminates the excessive profit, which the student would have to pay elsewhere.

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### **STUDENT BENEFITS**

#### *FACULTY ADVISERS*

To bring about a closer relation between students and members of the faculty and parents, and for the purpose of safeguarding every interest of the individual student, the College has adopted an "advisory system" which applies to all students. A small number of students are assigned to each instructor, who is known as their adviser for the year, and whose duty it is to know each

of them personally, and to meet them from time to time. The adviser endeavors to become familiar with the conditions surrounding his students. In many instances he selects studies suited to the student's need or adjusts the student to his work and surroundings. Parents should not hesitate to write to advisers or to the President concerning matters that may have to do with students' comfort and progress in their studies.

#### *CARE OF HEALTH*

The health of all students is a matter of chief concern to the officers of the College. The rules require that all cases of illness be reported promptly. A responsible physician is employed who attends all students without charge in cases of illness or injury received in the line of duty, except cases of surgery. Sickrooms for the better accommodation of boys and girls during illness are provided, without additional cost, in each of the dormitory buildings.

All students have access to the separate gymnasiums for boys and girls. Games and sports are encouraged for their mental relief and the physical relaxation afforded. These exercises, taken indoors and in the open air, followed by baths, and with the privilege of consultation on matters of personal health, afford valuable safeguards to the health of every student who attends the College.

One of the finest and best gymnasiums in the country is now fully equipped for the use of all students. A large swimming pool in connection is available for women two days each week under the supervision of a competent instructor.

#### *STUDENT HELP*

Students are employed on the farm, in the creamery, dining-hall, the Printing Department and elsewhere. This, in connection with such opportunities as are afforded in the city, has enabled a very considerable number of students practically to make their own way through their College courses. The amount a student can earn depends largely upon his energy and the time he can spare from his studies. It must not be inferred that the A. and M. College engages to afford employment sufficient to enable every worthy young man to complete the course without other resources. With the growth of the institution has come an increased demand for this employment which it is impossible to meet in full, yet

very few students have been compelled to leave College in recent years on account of inability to secure work.

### HONORS

Honors may be awarded to students upon graduation for high standard in scholarship, and also for attainments in a particular department, as herein provided.

High honors may be granted by the faculty of the College to any student in any school of instruction provided the candidate has received no grades below 80 per cent and an average of 90 per cent in his College work for the sophomore, junior and senior years.

General honors may be granted to students provided they have not made a grade of E., I., or F. in any subject and an average of 80 per cent during the sophomore, junior or senior year in College.

These are the honor students for the Senior class for 1920-21, with their average percentage grades for four years:

Agriculture, Herbert Sugg,	85.5
Engineering, Blair Stone,	84.
Home Economics, Miriam Berkhimer.	89.2
Science and Literature, Mabel D. Holt.	97.2
Education, Pauline Morris.	86.6
Commerce and Marketing, Philip Bollinger.	89.6

### GRADES AND REPORTS

The quarter grade is the average of the daily grade and the grades made in tests, and in making up the final grades for the quarter, the quarter grades shall count two-thirds and the final examination grades one-third. Reports showing the grades and standing of students are sent to parents and guardians at the end of each quarter. Attention is particularly directed to these reports; they are the best indication of the work and standing of the student.

Students receiving a condition in a subject must remove the conditions before the end of the third week of the following quarter.

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### PHYSICAL EDUCATION AND ATHLETICS

The Department of Physical Education has control of all physical education and athletics in the College. This of course includes all Intercollegiate and Intramural sports.

The aims of this department are to develop as much organic

power as possible, to make a moderate muscular development, to get the best possible coordination and to furnish a recreation to balance the demands made upon the student by his class room work.

#### *COMPLETE EQUIPMENT*

The new Gymnasium is the pride of the institution and is the most talked-of building on the campus. Its large basketball court and its seating capacity make it the one place where everyone wants to go for every attraction. The student body makes the gymnasium the meeting place for the large gatherings. The swimming pool, large locker rooms, spacious offices and excellent equipment add a certain tone to the athletics not found in the ordinary institution.

Lewis Field is provided for the use of the students for football and track, and all Interscholastic contests. The baseball field is adjacent to the gymnasium and has one of the best locations for drainage on the campus. Tennis courts, cross country running courses and ample rooms for soccer football make the Oklahoma A. and M. College the one institution not hampered by lack of space in this section of the United States.

#### *STRICT ELIGIBILITY RULES*

Competitive athletics are not compulsory, but optional to students who qualify to eligibility rules. It can never be said that athletics cause students to fail in their school work, because, in order to participate, a student must pass, without conditions or failures, two-thirds of the preceeding quarter's work. For participation in the Missouri Valley Conference he must pass twenty-eight hours the three preceeding quarters.

Complete faculty control on eligibility insures parents that their boys will not be allowed to neglect their studies for athletics.

The Oklahoma A. and M. College is a member of the Oklahoma Conference and the Southwest Conference and its teams meet every year a number of Missouri Valley Conference schools. We expect to be a member of the Missouri Valley Conference within the next two years.

No student is a member of an intercollegiate team unless he is an amateur athlete and unless he has been in the College one full college year.

All coaches and members of the Physical Education Department are employed by the State, by the year, and all are residents of the City of Stillwater, which makes for a greater interest in the College and student body.

#### *BACHELOR'S DEGREE OFFERED*

The Oklahoma A. and M. College is the leading institution in Physical Education in the ten Southern states of this section of the Country. A four year course leading to a Bachelor of Science Degree is given. A minor course is given to those who want to elect work in Physical Education and a diploma is given for this special work.

The finances of the department of Physical Education are conducted the same as any other big business. The year's budget calls for the expenditure of \$25,000. During the year of 1921-22 the Athletic Association showed a profit of several thousand dollars.

#### *ATHLETICS FOR WOMEN*

The women have their own basketball court, tennis courts, and large athletic field, as well as the use of the men's basketball court for final practices and contest games, and the men's swimming pool half the week. All athletic activities are inter-class, none inter-collegiate. The contest games of 1921-1922 were soccer, basketball, baseball, and tennis. There were also competitive meets in swimming and gymnastics, and hiking groups.

All athletics for women are under the supervision and direction of the Women's Department of Physical Education. The Women's Athletic Association, which is affiliated with the National W. A. A., is very active in its work of encouraging all girls on the campus to participate in athletics, health giving and health sustaining activities. The women athletes are awarded by the W. A. A. a black sweater with orange O emblem after attaining certain individual honors and positions on teams.

No woman physically unfit, as determined by the College Physician or Women's Physical Instructor is allowed to participate in strenuous games or contests.

#### *GYMNASTICS FOR WOMEN*

Physical Education for all women is required during the first two years of residence. The required work includes floor and

apparatus work, field sports and games, folk-dancing, and swimming.

There are elective credit courses offered for which, if successfully passed, is given a Teacher's Certificate in Physical Education. There is also a four-year course in Physical Education which gives the student a B. S. Degree in Physical Education and a State Life Teacher's Certificate.

#### *RED CROSS LIFE SAVING WORK*

A Red Cross Life Saving Unit has been organized whose objects are to teach precautions that should be observed in the water, to rescue those in peril of drowning, and to resuscitate those apparently drowned. Applicants for membership are required to pass the American Red Cross Life Saving test, and upon successful completion are awarded a certificate, pin and bathing suit emblem. The class is open to any one interested in obtaining a thorough training in life saving methods and in increasing her swimming ability.

#### *RIFLE AND PISTOL SHOOTING*

Under the supervision of the Military Department, College women are given an opportunity for the handling of firearms and encouragement of marksmanship. Teams are chosen of ten members each and competitions are fired with other universities. A silver cup is presented annually to the student making the highest individual score in competitive firing. All members of the winning team are given gold marksmanship medals.



#### **MILITARY INSTRUCTION**

All military instruction is under immediate charge of the professor of Military Science and Tactics, who is an officer of the Regular army detailed by the War Department for duty with this institution as head of the Department of Military Science and Tactics.

The rules and orders relating to the organization, control, and training of the members of the Reserve Officers' Training Corps, and the appointment, promotion and reduction of cadet officers will be made by the head of the Department after consultation and agreement with the College President.

*CADET APPOINTMENTS*

Cadet officers are selected from the Junior and Senior classes, and non-commissioned officers from the Sophomore and Junior classes of the College. Appointments are dependent upon the student's active and soldierly performance of duties, sense of duty and responsibility, and general good conduct and class standing.

The main objects of Military Instruction are:

1. To develop the student physically through drill and other exercises.

2. To develop the student mentally by requiring him accurately to perform duties imposed upon him, which demand tact, thought and initiative.

3. To build character by insisting upon proper submission to discipline, which entails self-control, and by insisting on the student's meeting the responsibilities which are placed upon him.

The finished product should be a man of robust physique, correct carriage, strong character, with a proper regard for constituted authority and a highly developed idea of justice, and who is capable and willing to defend our national institutions in the event of an emergency.

*RESERVE OFFICERS' TRAINING CORPS*

Through the National Defense Act of June 3, 1916, and the Army Reorganization act of June 4, 1920, the President of the United States is authorized to establish and maintain in civil educational institutions units of the Reserve Officers' Training Corps, the object of which is set forth in special regulations of the War Department as follows:

"The primary object of the Reserve Officers' Training Corps is to provide systematic training at civil educational institutions for the purpose of qualifying selected students of such institutions as reserve officers in the military forces of the United States. It is intended to attain this object during the time that students are pursuing their general or professional studies with the least possible interference with their civil careers by employing methods designed to fit men physically, mentally and morally for pursuits of peace as well as pursuits of war. It is believed that such military training will aid greatly in the development of better citizens. It should be the aim of educational institutions to maintain one or more units of the Reserve Officers' Training Corps in order that in time of national emergency there may be instantly available a large number of educated men physically efficient and trained in the fundamentals of military science and tactics and fitted to lead intelligently the units of the armies upon which the safety of the country will depend. The extent to which this object is accomplished will be the measure of the success of the Reserve Officers' Training Corps."

It has been the practice of the United States upon the outbreak of war to expand a small professional peace establishment into a great non-professional war army. These expansions always have been effected without any perpetuity of doctrine or organiza-

tion, through which the experience generated in one expansion could be utilized in the next. Or, to put it another way, at certain crises in our history, with a vast expenditure of treasure and human energy we have established a great organization and then have demolished that organization after the emergency without any provision for making that expenditure a permanent national investment. After being forced to militarize a whole generation, we have taken no precautions to make the sacrifices of that generation a heritage of experience for the next generation that may be called upon to bear the stress of war. It is primarily the object of the Army Reorganization Act to perpetuate the framework of the organization developed in the World War, so that its tremendous cost can be funded as a permanent investment for all time.



## ENDOWMENTS, SCHOLARSHIPS, LOAN FUNDS, PRIZES

### *JEROME KATZ MEMORIAL*

Jake Katz, a merchant of Stillwater, has founded five annual scholarships of \$100 each for students in the four-year courses at Oklahoma A. and M. College, in memory of his deceased son, Albert Jerome Katz. These scholarships, first available in September, 1920, are payable in nine monthly installments each, and are awarded by the President to needy students.

### *OTHEY ENDOWMENT*

M. J. Otey, financial secretary of the College and an alumnus of 1902, has set aside for the College an annual gift of \$500 to be awarded to needy students beginning July 1, 1922.

### *ALUMNI CORPORATION LOAN FUND*

The Alumni Corporation of the College has a loan fund available to junior and senior students. A special committee of the Alumni Corporation passes on applications for loans. A senior student is not permitted to be in debt to the loan fund for more than \$100 at one time, and a junior student for more than \$50 at one time. Loans are made only in cases of absolute necessity.

### *LAHOMA CLUB LOAN FUND*

The Lahoma Club has a Loan Fund from which money is loaned worthy young women to help them continue their studies

at A. and M. College. Applications for loans should be made to the Loan Fund Committee. Loans are to be paid back within two years at a small rate of interest.

#### *AGRICULTURAL SCHOLARSHIPS*

The Seventh State Legislature passed an act providing for two scholarships in practical agriculture at Oklahoma A. and M. College, each of the value of \$100 yearly for two years, to be awarded to boys in each of the seventy-seven counties of the State who make the first and second highest general averages in examinations to be conducted in each county under the supervision of the county superintendent, all papers to be sent to the College for grading. A later legislative amendment made girls eligible to compete for these scholarships. The act provides that examinations shall be held annually, so that beginning with the year 1920, it was made possible for 308 students to be receiving free education from the State each year.

#### *OKLAHOMA BANKERS' SCHOLARSHIPS*

The Oklahoma Bankers' Association has offered nine scholarships in the A. and M. College, valued at \$160 each, to be awarded to the highest scoring club boy and girl in each banking district, except in Group 1, where the scholarship will be awarded to the highest scoring boy or girl in that district. Awards are made on contest work in the junior clubs conducted by the Extension Division of the A. and M. College.

#### *COOPERATIVE ELEVATOR AWARD*

The Cooperative Elevator Association of Oklahoma offers a scholarship in the A. and M. College, valued at \$160, to the member of the Wheat Club qualified to receive it, who makes the highest total score in his Wheat Club work during 1922.

#### *COTTONSEED CRUSHERS' SCHOLARSHIP*

The Cotton Seed Crushers' Association of Oklahoma again offers a scholarship in the A. and M. College, valued at \$160, to the member of the Cotton Club qualified to receive it, who makes the highest total score in his Cotton Club work during 1922.

#### *EDUCATIONAL LOAN FUND OF FEDERATE WOMEN'S CLUBS*

The Oklahoma State Federation of Women's Clubs maintains a fund from which girls who want to attend State schools

and find they need financial aid may borrow. Notes are made for a period of two years at 4 per cent interest. However, if the one borrowing secures a position within that time, she is expected to begin to repay the amount as soon as she begins to earn, thereby putting the money back in the fund so that it may sooner be an aid to others. Applications are to be made to the state chairman, Mrs. B. B. Barefoot, Chickasha, Oklahoma.

#### PRIZES

State Oratorical.—First prize \$25, Bishop Clothing Company, Stillwater; second prize \$15, Smith's Studio, Stillwater.

Intercollegiate Debate.—First prize \$15, Peck Brothers and Miss Nora Talbot; second prize \$10, M. J. Otey, Stillwater.

Freshman Extempore Speaking.—First prize \$10, First National Bank, Stillwater; second prize \$5, Tiger Drug Store, Stillwater.



### SOCIETIES AND PUBLICATIONS

General literary societies always are active among the students. The Philomethan and the Omega Literary Societies, the Debate and Oratory Club, and the Platform enroll a large number of students, and, in addition, a number of clubs and societies have been formed by students specializing in science, engineering, education, agriculture, home economics, and commerce, for the purpose of supplementary work and investigation. The Athletic Association has charge of all College sports, the "Tug-o-war" and the interest of the institution in the interscholastic and intercollegiate meets. The Women's Athletic Association is well organized among the College women and is working toward nationalization. It operates on the point system for all work done in athletics.

The Dramatic Club is open to students interested in dramatic art. The Debating and Oratory Club and the Platform are active in furthering the interest in debating and oratory. The College participates in intercollegiate debates and oratorical contests.

The Student Senate is made up of representatives from the Sophomore, Junior, and Senior classes, elected during the third quarter each year. This is a student government body which acts in harmony with the College administration in making laws to govern student activities.

The College musical organizations are the College Band, the Men's Glee Club and Women's Glee Club, the Mixed Chorus and the College Orchestra.

#### RELIGIOUS ORGANIZATIONS

The Young Men's and the Young Women's Christian Associations aim to bring the fundamentals of the Christian faith before the students through their various forms of activities.

Representatives of these organizations render invaluable assistance throughout the year in helping new students to orient themselves and in befriending those who need a word of cheer. The Student Employment Bureau is provided to assist students working their way through College.

Opportunity for religious education is offered by means of discussion groups and bible classes, where a Christian solution of campus, social, economic, racial, and world problems are sought. One night a week is set aside as "Y" night, when students have the opportunity of hearing outstanding local, national and international speakers and religious educators.

Splendid opportunity for development is afforded through the social service program of the Associations. Each Sunday bands of students visit near-by communities and hold religious services.

These organizations also are important factors in furnishing clean, wholesome social activities for the whole student body. Frequently socials, parties, hikes, and community sings are held. and once each week the Y. M. C. A. shows clean, carefully censored motion pictures.

In brief, the Y. M. C. A. and the Y. W. C. A. are the dynamics which propel the moral and Christian principles on the campus and cause them to permeate all College activities.

Many good churches are in Stillwater and all cooperate with these Christian associations in their efforts to stimulate the Christian lives of all the students.

#### COUNTY CLUBS AND GENERAL FEDERATION

To bring home units into greater prominence on the campus and to make the College more favorably known at home, students from many Oklahoma counties and from a number of states outside Oklahoma have organized county and state clubs. These, in

turn, have been affiliated in a general federation of clubs, whose purpose is to determine the general policy and a program of activity for the local clubs.

#### *HONORARY FRATERNITIES*

Seven honorary national fraternities, two of which were founded at A. and M., are now established at Oklahoma A. and M. College. They are:

Alpha Zeta, honorary agricultural, organized in 1897 at Ohio State University to stimulate interest in agriculture. Scholarship and interest in agricultural prerequisites. Installed at A. and M. 1918.

Phi Kappi Phi, honorary scholastic, organized in 1898 at the University of Maine to stimulate mental achievement, emphasize scholarship and foster the aims of education. Only one-third of the graduating class having highest average, eligible. Installed at A. and M. 1919.

Kappa Delta Pi, honorary educational, organized 1910 at the University of Illinois, to promote professional ideals and standards in teacher training institutions. Installed at Oklahoma A. and M. College in 1912.

Omicron Nu, honorary home economics, organized in 1912 at Michigan Agricultural College to promote scholarship and research in the field of household economics. Only seniors averaging 87½ per cent and juniors averaging 90 per cent are eligible. Personality and interest in the field also considered. Installed at A. and M. 1919.

Pi Kappa Delta, honorary forensic, organized in 1913 among central western colleges to promote interest in forensics. Participation in three winning debates determines eligibility. Installed at A. and M. College 1916.

Kappa Kappa Psi, honorary music, organized 1919 at A. and M. as a musical fraternity to stimulate interest in band work. Scholastic standing, character and length of time of affiliation with College band determine eligibility.

Theta Alpha Phi, honorary dramatic, organized 1920 at A. and M. as a national college dramatic fraternity. Candidate must take a leading part, two important parts or four minor parts in three college plays to be eligible.

*PROFESSIONAL AND DEPARTMENTAL SOCIETIES*

A number of professional fraternities and departmental clubs also are maintained by students. Among these are:

Alpha Kappa Psi, organized 1904 at New York University, to stimulate interest in the study of commerce, marketing and economics.

Alpha Gamma Rho, organized in May 1921, at the A. and M. College, as a professional agricultural fraternity.

Local societies of the American Institute of Electrical Engineering, American Society of Mechanical Engineering and the American Association of Engineers.

The Engineering Society, composed of general students in the School of Engineering.

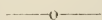
Science and Literature Club, composed of students in the School of Science and Literature.

Block and Bridle Club, Hoof and Horn Club, Dairy Society, and Agricultural Society, composed of students in animal husbandry, dairying and general agriculture.

*PUBLICATIONS*

Student publications include the Orange and Black, a weekly newspaper, and the Redskin, the College annual. The Alumni Corporation publishes the A. and M. Boomer, a monthly magazine.

College publications include bulletins and catalogs, special announcements of the various schools, the Agricultural News Service, which is sent to farm journals and weekly newspapers, and pamphlets and bulletins from the Extension Division and the Agricultural Experiment Station.

**REQUIREMENTS FOR ADMISSION**

All schools in the College are open to both men and women, who may enter at the beginning of any quarter or at the beginning of the summer session.

All persons who desire to enter any of the Schools of the College should make application to the Registrar two weeks before the opening of the quarter in which they desire to enter. Those entering by certificate preferably should make application immediately after their graduation. Applicants should write to the Registrar for proper registration blanks which are to be filled out and re-

turned prior to registration. When these blanks are received, the credits will be checked and if requirements are met a permit to register will be sent to the applicant. This permit eliminates the necessity of appearing before the entrance committee and greatly facilitates registration. No applicant will be permitted to register until he shall have presented his certificate of high school credits or passed the entrance examinations.

### GENERAL REQUIREMENTS

**Age:** Applicants for regular admission must be at least fourteen years old. Applicants who seek admission as Special Students must be of mature age.

**Character:** All applicants must furnish evidence of good moral character.

**Required Units:** For full admission to any School of the College fifteen units of high school or other secondary school work are required. The units presented must comply with the requirements listed below:

	Agriculture		Rural Engineering	Engineering	Home Economics	Science and Literature	Education	Commerce and Marketing	Administrative Engineering	Veterinary Medicine
English .....	3	3	3	3	3	3	3	3	3	3
Algebra .....	1	1½	1½	1	1½	1	1	1	1½	1
Plane Geometry .....	1	1	1	1	1	1	1	1	1	1
Solid Geometry .....	1	½	½	.....	.....	.....	.....	1	½	.....
Science .....	1	1	1	1	1	1	1	1	1	1
Foreign Language .....	1	1	1	.....	1	1	1	1	1	.....
Social Science .....	1	.....	.....	1	.....	1	1	1	.....	1

**Elective Units:** The applicant shall present enough additional units in any accredited work satisfactorily completed in any accredited high school to make up a total of fifteen units, provided a total of not more than six units are presented in vocational and miscellaneous subjects.

In order to comply with State law, a student who does not present one unit in American History for entrance will be required to take the equivalent in College before graduation.

**Admission with Conditions:** Applicants who offer fourteen units in accordance with the above requirements will be admitted to freshman standing but will be conditioned in one unit.

**Removal of Conditions:** A Secondary School operated in connection with the College gives opportunity for students to make up entrance requirements. All such requirements must be made up by the end of the first year.

#### *METHODS OF ADMISSION*

Admission to the College must be secured in one of the following ways:

1. **By certificate:** Graduates of high schools will receive entrance credits according to the standing of their respective schools as shown by the official bulletin of the State Department of Education. If the applicant is a graduate from a high school in another State such units will be accredited as are acceptable by institutions of equal rank with this College. If a high school graduate, the applicant must comply with the requirements listed under entrance by examination.

2. **By Examination:** Any or all entrance requirements may be met by examination. Entrance examinations will be held at the College on the following dates: September 5 and December 4, 1922, and March 5, and June 1, 1923.

#### *ADMISSION WITH ADVANCED STANDING*

Graduates from the two-year courses in normal schools in Oklahoma will receive junior standing in the Schools of Home Economics, Education and Commerce and Marketing and in the departments of Agricultural Education, Rural Economics and the general course in the School of Agriculture; in the School of Engineering and Science and Literature and in the remaining courses in the School of Agriculture, they will receive the credits to which their previous work entitles them.

Applicants for admission from normal schools outside of Oklahoma will be admitted to the College with that advanced standing to which their previous work entitles them except that no credits will be given greater in amount than would be granted by institutions of the state within which the normal school is situated and of equal rank with this College.

Applicants from other institutions offering collegiate or professional courses equivalent to those given in this College will be assigned such advanced standing as may be determined by the Committee on Advanced Standing.

Before considering the claims of any applicant for advanced standing, the Committee will require an official certificate of honorable dismissal together with a catalog of the institution and a statement showing the admission requirements satisfied by the applicant in the institution from which he or she comes.

The College reserves the right to test by examination the records presented.

All claims for credits must be specified when applying for admission.

#### *ADMISSION TO SECONDARY SCHOOL*

Applicants desiring to be admitted to the non-vocational course in the Secondary School must have completed one year of high school work. In order to be eligible to enter the Vocational courses applicants should have completed work equal to the eighth grade.

#### *SPECIAL STUDENTS*

Persons of mature age who do not possess all the requirements for admission and are not candidates for a degree will be permitted to enter any of the courses in the different schools upon giving satisfactory evidence to the Dean of the School that they are prepared to take advantageously the subjects they desire. Persons applying for admission on the above basis are required to present a detailed statement of their preparatory work at the time of their admission.

#### *LATE REGISTRATION*

A former student who registers after the last regular registration day will be required to pay a "late registration fee" of \$1 per day late, but in no case will the fee be more than \$3. A "late registration fee" of \$5 will be required from all students who fail to register during registration days of the winter and spring quarters provided they were registered during the fall quarter. Class instructions will begin promptly as scheduled and late registrants will be required to pass an examination upon all work already completed in the subjects they desire to take.

#### *ADDING COURSES*

No student will be permitted to add a course except on approval of the Dean and in no case later than two weeks after class instruction begins. A fee of \$1 will be required for each "add card" issued.

*DROPPING COURSES*

A student may drop a course with the consent of the Dean. After the first two weeks of class instruction a fee of \$1 will be charged for each "drop card" issued. A student who drops a course after the first six weeks of the class instruction may, at the discretion of the Dean, receive a failing grade in the course.

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*DEGREES*

The following academic and technical degrees are conferred after successful completion of the prescribed courses of study and compliance with all the requirements of the College:

Bachelor of Science, in Agriculture, in Engineering, in Home Economics, in Science and Literature, in Education, in Commerce and Marketing, in Veterinary Medicine.

*ADVANCED DEGREES*

The following advanced degrees are conferred after compliance with all the requirements of the College:

Master of Science, in Agriculture, in Home Economics, in Science and Literature, in Education, in Commerce and Marketing.

*PROFESSIONAL DEGREES*

The following professional degrees are conferred after compliance with all the requirements of the College:

Architectural Engineer (A. E.), Chemical Engineer (Ch. E.), Civil Engineer (C. E.), Electrical Engineer (E. E.), Mechanical Engineer (M. E.).

*REQUIREMENTS FOR DEGREES*

The student, in order to secure a Bachelor's Degree in any of the Schools of the College, must complete the work prescribed by the School awarding the degree. Candidates who enter with advanced standing must be in residence at the College for at least three quarters or their equivalent in summer sessions.

One year of resident graduate study, including 51 credit hours is required of every candidate for the Master's Degree. Graduates of this College may be permitted to obtain twenty-five credits at another institution of equal rank. A thesis related to the Major subject is required and must embody original research work under the supervision of the major professor. An outline of the thesis must be submitted to him for approval at least four months preceding the date of graduation. The complete typewritten thesis must be turned in in triplicate to the Committee on Graduate Study for approval at least two weeks before graduation. The candidate must stand an oral examination on the work offered in support of his candidacy. The examining committee will be appointed by the Committee on Graduate Study. A grade of less than 85 will not be received as credit for graduation.

For requirements for the various certificates see announcement of the work prescribed by the School awarding the certificate.

THE DIVISION OF AGRICULTURE



## THE DIVISION OF AGRICULTURE

JAMES BURNETTE ESKRIDGE, A. M., Ph. D.; *President of the College.*

MALCOLM ALFRED BEESON, B. S., D. Sc.; *Dean of Division of Agriculture, Dean of the School of Agriculture.*

CARL THOMAS DOWELL, B. A., B. S., Ph. D.; *Director of Experiment Station.*

WILLIAM AMMON CONNER, B. S.; *Director of Extension.*

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The Division of Agriculture is composed of the School of Agriculture, the Experiment Station, and Extension Division. The Experiment Station is devoted to research work where agricultural information is secured which will be of practical value to the farmer as well as serve as a basis for agricultural instruction. In the School of Agriculture information is formulated into courses of study and taught to resident students and through correspondence courses to non-resident students. The Extension Division is composed of a non-resident instructional force which carries information to the farmers and rural population of the State through instruction and demonstration.

In the division of Agriculture there is a corps of 225 men and women devoting their time to assisting in developing the agricultural resources and rural life of Oklahoma and in training the youth and farmers of the State.

The resources of the entire force are focused upon those basic and fundamental lines of agricultural work which will be accumulative in value and lead to permanent improvement. The close cooperation between the forces of the School of Agriculture, the Extension Division and Experiment Station in the Division of Agriculture enables the College to serve the State more efficiently than it otherwise could.

On the following pages a fuller and more detailed statement of the work of the School of Agriculture, Experiment Station and Extension Division is given.

# SCHOOL OF AGRICULTURE FACULTY

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JAMES BURNETTE ESKRIDGE, A. M., Ph. D.; *President of the College.*  
 MALCOLM ALFRED BEESON, B. S., D. Sc.; *Dean of Division of Agriculture, Dean of the School of Agriculture.*  
 CHARLES EMERSON SANBORN, A. B., A. M.; *Professor of Entomology.*  
 FRED MAAS ROLFS, B. S., M. S., Ph. D.; *Professor of Horticulture.*  
 ARTHUR CHRISTOPHER BAER, B. S. A.; *Professor of Dairy Husbandry.*  
 HARRY EMBLETON, B. S.; *Professor of Poultry Husbandry.*  
 LESLIE EUGENE HAZEN, B. S., M. E.; *Professor of Rural Engineering.*  
 WARREN LYLE BLIZZARD, B. S.; *Professor of Animal Husbandry.*  
 OLIN MITCHELL CLARK, B. S.; *Professor of Agricultural Education.*  
 .....; *Professor of Rural Economics and Sociology.*  
 .....; *Professor of Agronomy.*  
 CARL POLLARD THOMPSON, B. S., M. S.; *Associate Professor of Animal Husbandry.*  
 ADRIAN DAANE, Ph. B., M. S.; *Associate Professor of Agronomy.*  
 GLEN BRIGGS, B. S., M. S.; *Associate Professor of Agronomy.*  
 ARTHUR D. BURKE, B. S., M. S.; *Associate Professor of Dairy Husbandry.*  
 ALBERT EDWARD DARLOW, B. S.; *Assistant Professor of Animal Husbandry.*  
 EARL DAVID MARKWELL, B. S.; *Assistant Professor of Horticulture.*  
 HENRY FRED MURPHY, B. S.; *Assistant Professor of Agronomy.*  
 WILLIAM AMBROSE RADSPINNER, B. S., M. S.; *Assistant Professor of Horticulture.*  
 MILLARD GEORGE HARNDEN, B. S.; *Assistant Professor of Agricultural Education.*  
 WILLIAM EDGAR JACKSON, B. S., M. S.; *Assistant Professor of Entomology.*  
 JOSEPH D. STAFFORD, B. S.; *Assistant Professor of Rural Economics and Sociology.*  
 WALTER B. COE, B. S.; *Assistant Professor of Agricultural Education, in Charge of Observation and Practice School.*  
 CHRISTIAN JENSEN, *Assistant in Forestry and Landscape Gardening.*  
 FRED J. BEARD, B. S.; *Instructor in Vocational Animal Husbandry.*  
 EDGAR R. LAWRENCE, B. S.; *Instructor in Vocational Dairying.*  
 .....; *Instructor in Vocational Agronomy.*  
 CHARLES W. UPP, B. S.; *Instructor in Vocational Poultry Husbandry.*  
 FLOYD Z. BEANBLOSSOM, B. S.; *Instructor in Poultry Husbandry and Foreman of Poultry Farm.*  
 HAROLD E. DOTY, B. S.; *Instructor in Dairying and Foreman of Factory.*  
 O. C. COOPER, B. S.; *Assistant in Dairying and Herdsman.*  
 L. F. FRAZIER, *Assistant in Official Cow Testing.*  
 ALEX LAVIN, *Herdsman.*  
 E. R. JONES, *Herdsman.*  
 FRANK BAYLISS, *Herdsman.*  
 FELIX ROY, *Herdsman.*  
 A. E. BASTION, *Farm Foreman.*  
 S. SMITH, *Florist.*

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CHARLES OSCAR CHAMBERS, A. B., A. M., Ph. D.; *Professor of Botany.*  
 EDWARD CLARK GALLAGHER, B. S.; *Director of Athletics, Professor of Physical Education.*  
 DEWITT TALMADGE HUNT, B. S.; *Superintendent of Shops.*  
 \*HILTON IRA JONES, A. B., A. M., Ph. D.; *Professor of Chemistry.*  
 DAVID TERRY MARTIN, A. B.; *Professor of Public Speaking.*  
 WILLIAM PTOLEMY POWELL, B. A., M. A.; *Professor of English.*  
 SOLOMON LUTHER REED, A. B., A. M., Ph. D.; *Professor of Education.*

\*On leave of absence.

JOSEPH BENJAMIN PATE, B. A., Major, Inf., U. S. Army; *Commandant, Professor of Military Science and Tactics.*

JOSEPH HOWARD RUSTEMEYER, Captain, Inf., U. S. Army; *Professor of Military Science and Tactics.*

JOSEPH JOHN SCHMIDT, Captain, Inf., U. S. Army; *Professor of Military Science and Tactics.*

JOHN MARVIN HAGENS, Captain, Inf., U. S. Army; *Professor of Military Science and Tactics.*

ROBERT OSCAR WHITENTON, A. B., M. S.; *Associate Professor of Zoology.*

CLARENCE HAMILTON McELROY, B. S., D. V. M.; *Associate Professor of Bacteriology and Veterinary Medicine.*

GRACE ALICE MOUNTCASTLE, Ph. B.; *Associate Professor of English.*

AGNES BERRIGAN, B. A., M. A.; *Associate Professor of English.*

FRED McCARREL, B. S., M. S.; *Associate Professor of Education.*

ROBERT DuBOIS, A. B., M. S.; *Associate Professor of Chemistry.*

HARRY WILLIAM ORR, D. V. M.; *Assistant Professor of Veterinary Medicine.*

LLOYD KEITH COVELLE, Certificate; *Assistant Professor in Shops.*

EDWIN SODERSTROM, Diploma; *Assistant Professor in Shop Practice.*

ROBERT STRATTON, B. A., M. A.; *Assistant Professor of Botany.*

CHARLES LESLIE NICKOLLS, B. S., M. S.; *Assistant Professor of Chemistry.*

THOMAS MALCOLM AYCOCK, B. S.; *Assistant Professor of Physical Education.*

## THE SCHOOL OF AGRICULTURE

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Agriculture is the most important industry in Oklahoma and the prosperity of the State will depend to a large extent upon the development of its agricultural resources.

Farming is much more complicated today than it was in the days of our forefathers. The change from farming cheap, fertile soil with hand tools and unskilled labor for the purpose of securing food and clothing for the family only, to farming high-priced, depleting soil with complicated machinery and high-priced labor and selling almost everything that is produced requires better training and skill on the part of the farmer.

Agriculture is a basic industry and it is so closely related to many other industries that it opens a large and varied field of opportunity to students. In addition to training men to become farmers, the courses of study in the School of Agriculture are arranged to prepare students for positions in many other fields, such as teaching in agricultural colleges and universities, experiment station work, specialists in the United States Department of Agriculture, extension specialists and county agents, teachers of vocational agriculture in high schools and colleges, agricultural journalists with farm papers and farm organizations, marketing specialists for farmers' cooperative marketing associations, agricultural specialists for railroads, banks and development companies, research and extension workers for manufacturers of agricultural products, farm machinery and implements.

The four-year courses leading to the degree of Bachelor of Science are so arranged that the student may specialize in any field of agriculture, such as agronomy, animal husbandry, dairying, horticulture, poultry, rural engineering, agricultural education, entomology or rural economics, and prepare to become a specialist in such a field, or he may, through the system of electives, take a more general education fitting himself for such positions as extension worker, vocational agriculture teacher, or for general farming. Students also are offered an opportunity to secure a general training in such basic subjects as English, chemistry, botany, bacteriology and zoology, which have an application in agriculture.

Graduate work leading to the Master's degree is offered in the various fields of agriculture that are mentioned above. The institution offers each year fellowships to a few students who wish to pursue their Master's degree.

The following departments in the School of Agriculture offer courses leading to the degree of Bachelor of Science: Agronomy, Animal Husbandry, Agricultural Education, Dairying, Horticulture, Poultry, Rural Engineering, and Rural Economics.

#### *TEACHER TRAINING IN AGRICULTURE*

The Smith-Hughes Act passed by Congress providing funds for secondary vocational education offers unusual opportunities for teachers of vocational subjects. Already a demand for trained teachers is noted which, it seems, can not be met unless more students prepare themselves to teach these subjects. The course in General Agriculture for Teachers, given on another page, meets the requirements for teachers of Vocational Agriculture under the provisions of this act.

To meet the present emergency, students who complete other courses in the School of Agriculture, and who present twenty-one quarter hours of work in Education, of which at least nine quarter hours must be prescribed courses in agricultural education, will be eligible to teach in secondary schools of the State receiving Smith-Hughes support for vocational agriculture. (This subject to change by the State Board of Vocational Education at its discretion).

#### *COURSES FOR NORMAL SCHOOL GRADUATES*

Graduates from the two-year course of the State Normal Schools of Oklahoma and other normal schools of similar standing are given junior standing in the Agricultural Education Department of the School of Agriculture and allowed to receive this degree in two years, which qualifies them for positions as Smith-Hughes teachers in agriculture.

#### *TWO-YEAR VOCATIONAL AGRICULTURE COURSE*

The two-year practical course in agriculture is given for young men and farmers who cannot take the time for a four-year course. Students without a high school education may enter. The course is designed to prepare young men for the farm and is made as practical as possible, dealing with those subjects which the farmers

will need on Oklahoma farms. Graduates from this course should go back to the farms and become leaders in their communities.

In order to encourage many Oklahoma farm boys to secure an education that will fit them for the farm, the Legislature has provided two scholarships of \$100 for each county each to run two years, available for students taking this course. Every county should avail itself of these scholarships. For detailed information, write the Dean of Agriculture.

Work taken in this course may be used as entrance credits to the degree courses.

#### *SPECIAL STUDENTS*

Mature students who wish to enter the School of Agriculture and spend a term or a year and specialize on certain college or vocational agriculture subjects will be allowed to enter as special students and select such courses as they desire and are qualified to take and can schedule with the approval of the Dean of Agriculture.

#### *FARMERS' SHORT COURSES IN AGRICULTURE*

The Farmers' Short Courses in Agriculture are designed to meet the growing demand on the part of the busy farmer who is actually engaged in work on the farm and who cannot avail himself of a college course, yet desires the latest information on the various phases of farm activity. The courses cover a period of from one to twelve weeks and are designed to give busy farmers the most useful instruction and practice in the various phases of agriculture in the shortest possible time and at a season when they can be away from home for a brief period. In this way the busy farmers and farmers' sons have an opportunity to receive the benefit of the advantages of the A. and M. College studying the farm, livestock, field experiments, and the work of the various departments, getting first hand information.

The following is a list of farmers' short courses offered: Twelve Weeks General Winter Short Course, Six Weeks Dairy Course, One Week Ice Cream Makers' Course, One Week Creameryman's Course, Four Weeks Livestock Course, Four Weeks Cotton Classing and Marketing Course, One Week Poultry Course, One Week Grain Grading and Marketing Course, Six Weeks Rural Engineering Course, Two Weeks Beekeeping Course, One Week Horticulture Course, Farmers' Week (Farm Congress).

For further information on farmers' short courses, address the Dean of Agriculture.

*CORRESPONDENCE COURSES IN AGRICULTURE*

There are many persons who have time and would like to take up courses in agriculture that they could work on at home. In order to meet this need and develop the habit of reading and studying at home, the School of Agriculture is offering correspondence courses in its various departments. In this way many progressive farmers will be able to keep in touch with the A. and M. College and receive information on how to solve their agricultural problems. Then, too, many busy teachers and students who wish to take further work toward a degree will have the opportunity to do some work while making money to go to school. Arrangements will be made for credit for this work under certain conditions and requirements.

*QUESTIONS ANSWERED*

The School of Agriculture, through its various departments, stands ready to aid the farmer by answering, through correspondence, such questions as he wishes to ask relating to any particular farm problem. For further information, address the Dean of Agriculture, A. and M. College, Stillwater, Oklahoma.

*POSITIONS FOR GRADUATES OF SCHOOL OF AGRICULTURE*

Owing to the many fields open to the graduates of the School of Agriculture there has been no difficulty in placing our men in good positions immediately upon graduation. In fact, the demand for trained men in agriculture has been in excess of the supply. The School of Agriculture conducts an employment bureau and aids its graduates in securing positions.

*AGGIE STUDENT ORGANIZATIONS*

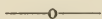
The Aggie Society is a large and progressive organization. It is the aim of this organization to promote good fellowship, interest and cooperation among the Aggie students. Meetings are held twice a month. Programs consisting of music, talks and debates by the students, also talks from members of the faculty and agricultural extension people are given. It has been the custom of the society to have at least one annual banquet, with students of agriculture, agricultural faculty members and others interested in agriculture, participating. In the last few years the organization has established a new event, the Aggie Round-Up. This event is held in the fall of the year. Each department in the School of Agricul-

ture furnishes a good exhibit and stunts of different kinds are given by the students. The day, Aggie Day as it has been called, has been set aside as an annual holiday for Aggies. There are many lessons taught in its program, along with much good, clean, wholesome fun.

The Alpha Zeta Fraternity is an honorary agricultural fraternity which was organized in Ohio University in 1897, the object of which was to stimulate interest in agriculture and agricultural scholarship. This fraternity was installed in A. and M. College in 1918.

The Block and Bridle Club has for its purpose the promoting of interest in Animal Husbandry within the College and State. Two stock judging contests are held annually under the auspices of this club, one for the junior and senior students of animal husbandry, the other for the freshmen and sophomores of agriculture. In the freshman-sophomore contest medals were given by the club to the highest individuals, thereby creating more interest in animal husbandry among the lower classmen. Different livestock breeders over the State give medals each year in the junior-senior contest.

The Dairy Club is an organization composed of students and others who are interested in dairying. This club was organized in the fall of 1918 by a number of dairy students. It is the aim of the organization to provide a means of getting the dairy students together to discuss such problems as might be of interest to dairying in Oklahoma and to create a closer and better fellowship among the dairy students.



## REQUIREMENTS FOR ADMISSION

### *FOUR-YEAR COURSES IN AGRICULTURE*

The requirements for admission to the four-year courses in Agriculture are stated in terms of units in common with all other regular courses in the College. The term "unit" means the equivalent of five recitations a week for one year in one branch of study in the Secondary School. Fifteen units are required for admission, an allowance of one unit being made, however, where an applicant has completed fourteen units of work in an accredited high school. The fifteenth unit may be made up from the Secondary School studies offered in the College.

Applicants for admission to all courses in the School of Agriculture, except agricultural engineering, will be required to present

three units in English, one in social science including history, two in mathematics which shall be made up of one unit in algebra and one in plane geometry, and nine additional units shall be elective from vocational, science, or other subjects. An additional half unit in algebra and solid geometry is required for admission to the course in agricultural engineering.

## TWO-YEAR VOCATIONAL AGRICULTURE COURSE

Completion of the eighth grade of common schools is required for admission to the courses in Secondary Vocational Agriculture, with the exception that students who have not completed the common school work but who show ability to handle the work and who are at least 14 years old, may be granted special permission to pursue this course, as outlined. Regular students may have vocational agriculture credits applied toward entrance to the A. and M. College.

## FARMERS' SHORT COURSE IN AGRICULTURE

Any one interested in farming, or better agriculture, is invited to enter the Farmers' Short Courses in Agriculture. There are no entrance examinations required. The student should be at least 16 years old. Those who wish to take the Twelve Weeks Winter Short Course and the Six Weeks Course in Dairying should have a common school education or its equivalent.

## DEGREE COURSES IN AGRICULTURE

The following outline of study represents the required and elective work in the several courses leading to the degree of Bachelor of Science. The courses are numbered, beginning with one hundred in the Freshman year, two hundred for Sophomore, three hundred for Junior, and four hundred for Senior year. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

The total requirements for graduation are 209 quarter credits, including credits in physical education and military science.

Before graduation, every student in agriculture must have had at least six months of actual farm experience satisfactory to the Dean of the school.

In the outline below, figures without parenthesis indicate hours of class-work, in parenthesis hours of laboratory work.

## GENERAL COURSE

### FRESHMAN YEAR

FALL QUARTER				WINTER QUARTER			
	Hrs.	Cr.			Hrs.	Cr.	
A. H. 106, Market types .....	2	(4) 3½		Agron. 106, Crop Production ....	2	(2) 2½	
Dairy 106, Elements .....	3	(4) 4½		P. H. 206, Farm Poultry .....	3	(4) 4½	
Shop 118, Farm Shopwork .....		(3) 1		Shop 119, Farm Shopwork .....		(3) 1	
Eng. 130, College .....	3	3		Eng. 131, College .....	3	3	
Chem. 106, Inorganic .....	3	(3) 4		Chem. 107, Inorganic .....	3	(3) 4	
Phys. Ed. 131 .....		(3) 1		Phys. Ed. 132 .....		(3) 1	
Mil. Sci. 101 .....		(3) 1		Mil. Sci. 102 .....		(3) 1	

## Oklahoma A. and M. College

## SPRING QUARTER

	Hrs.	Cr.
Hort. 106, Vegetable Gardening .....	3 (2)	3 $\frac{1}{2}$
Rur. Ec. 101, General .....	4	4
Shop 120, Farm Shopwork .....	(3)	1
Eng. 132, College .....	3	3
Chem. 108, Inorganic .....	3 (3)	4
Phys. Ed. 133 .....	(3)	1
Mil. Sci. 103 .....	(3)	1

## SOPHOMORE YEAR

## FALL QUARTER

	Hrs.	Cr.
Dairy 206, Dairy Cattle .....	2 (4)	3 $\frac{1}{2}$
Hort. 206, Fruit Growing .....	3 (4)	4 $\frac{1}{2}$
Rural Engr. 106, Farm Mach. ....	2 (2)	2 $\frac{1}{2}$
Chem. 219, Organic .....	3 (3)	4
Pub. Spk. 130, Essentials .....	3	3
Mil. Sci. 201 .....	(3)	1

## WINTER QUARTER

	Hrs.	Cr.
Agron. 206, Cereal Crops .....	3 (4)	4 $\frac{1}{2}$
Bot. 211, Agri. ....	3 (4)	4 $\frac{1}{2}$
Bact. 206, General .....	3 (4)	4 $\frac{1}{2}$
Chem. 220, Quan. Agri. ....	2 (6)	4
Mil. Sci. 202 .....	(3)	1

## SPRING QUARTER

	Hrs.	Cr.
A. H. 206, Breeds .....	3 (4)	4 $\frac{1}{2}$
Agron. 207, Soils .....	3 (4)	4 $\frac{1}{2}$
Ento. 206, General .....	4 (2)	4 $\frac{1}{2}$
Bot. 212, Agri. ....	3 (4)	4 $\frac{1}{2}$
Mil. Sci. 203 .....	1 (2)	1 $\frac{1}{2}$

## AGRONOMY COURSE

## JUNIOR YEAR

## FALL QUARTER

	Hrs.	Cr.
Agron. 311, Grain Judging .....	(4)	1 $\frac{1}{2}$
Agron. 306 Forage Crops and Cotton .....	3 (4)	4 $\frac{1}{2}$
Bot. 313, Genetics .....	4	4
Electives .....		7 $\frac{1}{3}$

## WINTER QUARTER

	Hrs.	Cr.
A. H. 311, Animal Nutrition .....	4	4
Agron. 309, Manure and Fert. ....	3 (4)	4 $\frac{1}{2}$
Agron. 310, Fiber Crops .....	3 (4)	4 $\frac{1}{2}$
Electives .....		5 $\frac{1}{2}$

## SPRING QUARTER

	Hrs.	Cr.
Agron. 308, Soil Fert. ....	3 (4)	4 $\frac{1}{2}$
R. Econ. 308, Farm Organ. ....	2 (4)	3 $\frac{1}{2}$
Bact. 315, Agri. ....	2 (2)	2 $\frac{1}{2}$
Electives .....		6 $\frac{1}{3}$

## SENIOR YEAR

## FALL QUARTER

	Hrs.	Cr.
Agron. 427, Crop Impr. ....	1 (4)	2 $\frac{1}{3}$
Agron. Electives .....		7
General Electives .....		6 $\frac{2}{3}$

## WINTER QUARTER

	Hrs.	Cr.
Agron. 432, Seminar .....	2	2
Agron. Electives .....		8
Gen. Electives .....		7

## SPRING QUARTER

	Hrs.	Cr.
Agron. 433, Seminar .....	2	2
Agri. 402, Col. & Sta. Work .....	1	1
Agron. Elective .....		7
Gen. Electives .....		6

## ELECTIVES

The electives in the department of Agronomy may be taken from the following list or in from any school or department in the College when approved by the adviser and dean:

## FALL QUARTER

	Hrs.	Cr.
Agron. 313, Weeds and Seed Test 1	(4)	
Agron 430, Spec. Grain Judg. ....	(6)	
Agron. 314, Soil Survey .....	1 (4)	
Agron. 435, Agron. Problems		

## WINTER QUARTER

	Hrs.	Cr.
Agron. 431, Commercial Grades	(4)	
Agron. 434, Adv. Crops .....	2 (4)	
Agron. 436, Agron. Problems		
Agron. 429, Advanced Soils .....	2 (4)	

## SPRING QUARTER

	Hrs.	Cr.
Agron. 312, Adv. Grain Judging ..	(6)	
Agron. 426, Special Crops .....	2	
Agron. 428, Dry-land Farming .....	2	
Agron. 437, Agron. Problems		

# ANIMAL HUSBANDRY COURSE

## JUNIOR YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
A. H. 308, Type and Form .....	1	(6) 3	A. H. 309, Livestock Judg. ....	1	(6) 3
Agron. 306, Forage and Cot. Crops	3	(4) 4½	Agron. 309, Manures and Fert. ....	3	(4) 4½
Bot. 313, Genetics .....	4	4	A. H. 311, Ani. Nut. ....	4	4
Pub. Spk. 130, Advanced .....	3	3	Vet. Sci. 318, Unsoundness of		
Vet. Sci. 316, Vet. Anat. ....	4	(3) 5	Horses .....	1	1
			Electives .....		3½
SPRING QUARTER				Hrs.	Cr.
			Agron. 308, Soil Fert. ....	3	(4) 4½
			Vet. Sci. 317, Animal Diseases ....	4	(3) 5
			R. Econ. 308, Farm Organ. ....	2	(4) 3½
			A. H. 310, Livestock Record ....	1	(4) 2½
			Electives .....	2	

## SENIOR YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
A. H. 426, Animal Breeding .....	4	4	A. H. 427, Swine Production .....	3	(2) 3½
A. H. 429, L. S. Selection .....	1	(8) 3¾	A. H. 430, Farm Meats .....	1	(4) 2½
A. H. 432, Beef Production .....	3	(2) 3¾	A. H. 436, Seminar .....	2	2
A. H. 435, Seminar .....	2	2	Electives .....		9
Electives .....		3¾			
SPRING QUARTER				Hrs.	Cr.
			A. H. 428, Sheep Prod. ....	3	(2) 3¾
			A. H. 431, Horse Prod. ....	3	(2) 3¾
			A. H. 433, Stock-farm Man. ....	2	(2) 2¾
			Agri. 402, Col. and Sta. Work .....	1	1
			A. H. 437, Seminar .....	2	2
			Electives .....		3

## ELECTIVES

The electives in the department of Animal Husbandry may be taken from the following list or from any school or department in the College when approved by the adviser and dean.

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
A. H. 505, Research (For Graduates) .....			A. H. 506, Research (for graduates) ..		
A. H. 438, Adv. Pedigrees .....	(6)	2	A. H. 439, Marketing Livestock ....	3	3
			A. H. 442, Advanced Meats .....	2	(4) 3½
SPRING QUARTER				Hrs.	Cr.
			A. H. 507, Research (for graduates) ..		
			A. H. 440, Advanced Feeding .....	3	3
			A. H. 443, Prod. and Mkt. Wool ....	3	3

# DAIRYING AND DAIRY HUSBANDRY COURSE

## JUNIOR YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Dairy 308, Milk Inspection .....	2	(4) 3½	Dairy 309, Dairy Products .....		
Dairy 312, Dairy Cattle Judging and Management .....	3	(4) 4½	Analysis .....	2	(4) 3½
Agron. 306, Forage Crops and Cotton .....	3	(4) 4½	Dairy 311, Buttermaking .....	2	(6) 4
Electives .....		5	A. H. 311, Animal Nutrition .....	4	4
			Electives .....		5½
SPRING QUARTER				Hrs.	Cr.
			Dairy 310, Ice Cream-Making .....	2	(6) 4
			R. Engr. 310, Farm Motors .....	3	(4) 4½
			R. Econ. 308, Farm Organ. ....	2	(4) 3½
			Electives .....		5½

## SENIOR YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Dairy 414, Breed Judging and Records .....	3	(4) 4½	Dairy 416, Market Milk .....	2	(4) 3½
A. H. 426, Animal Breeding .....	4	4	Dairy 419, Milk Production .....	3	(4) 4½
Bact. 412, Dairy Bact. ....	3	(4) 4½	Dairy 415, Fermented Milk .....	1	(4) 2½
Electives .....		4½	Dairy 421, Seminar .....	2	2
			Electives .....		5

## Oklahoma A. and M. College

## SPRING QUARTER

	Hrs.	Cr.
Dairy 417, Cheesemaking .....	2 (8)	4 $\frac{2}{3}$
Dairy 418, City Milk Supply .....	2 (4)	3 $\frac{1}{3}$
Dairy 422, Seminar .....	2	2
Agri. 402, Col. and Sta. Work .....	1	1
Electives .....		5

## ELECTIVES

The electives in the department of Dairying may be taken from the following list or from any school or department in the College when approved by the adviser and dean:

## FALL QUARTER

	Hrs.	Cr.
Dairy 423, Problems .....	2	
Dairy 315, Judg. Dairy Prod. ....	2	
Dairy 427, Dairy Mach. ....	2	

## WINTER QUARTER

	Hrs.	Cr.
Dairy 313, Milk Prod. and Dairy Man. ....	2 (4)	3 $\frac{1}{3}$
Dairy 420, Dom. Dairying (Elective for Junior and Senior Home Economics) .....	2 (2)	2 $\frac{2}{3}$
Dairy 424, Dairy Problems .....		2
Dairy 314, Dairy Cat. Pedi. ....		2

## SPRING QUARTER

	Hrs.	Cr.
Dairy 425, Dairy Problems .....		2
Dairy 426, Markets .....		2

## HORTICULTURAL COURSE

## JUNIOR YEAR

## FALL QUARTER

	Hrs.	Cr.
Hort. 310, Sys. Pomology .....	3 (4)	4 $\frac{1}{3}$
Bot. 313, Genetics .....	4	4
Electives .....		8 $\frac{2}{3}$

## WINTER QUARTER

	Hrs.	Cr.
Hort. 311, Plant Prop. ....	3 (2)	3 $\frac{2}{3}$
Hort. 314, Nut Culture .....	2 (2)	2 $\frac{2}{3}$
Electives .....		10 $\frac{2}{3}$

## SPRING QUARTER

	Hrs.	Cr.
Hort. 312, Small Fruits .....	3 (2)	3 $\frac{2}{3}$
Hort. 313, Farm Forestry .....	3	3
Electives .....		10 $\frac{1}{3}$

## SENIOR YEAR

## FALL QUARTER

	Hrs.	Cr.
Hort. 412, Com. Pomology .....	3 (2)	3 $\frac{2}{3}$
Hort. 413, Floriculture .....	3 (2)	3 $\frac{2}{3}$
Hort. 426, Seminar .....	2	2
Electives .....		7 $\frac{2}{3}$

## WINTER QUARTER

	Hrs.	Cr.
Hort. 414, Forestry .....	3 (2)	3 $\frac{2}{3}$
Hort. 416, Plant Breeding .....	3	3
Hort. 427, Seminar .....	2	2
Electives .....		8 $\frac{1}{3}$

## SPRING QUARTER

	Hrs.	Cr.
Hort. 417, Landscape Gar. ....	3 (2)	3 $\frac{2}{3}$
Agri. 402, Col. and Sta. Work .....	1	1
Hort. 428, Seminar .....	2	2
Electives .....		9 $\frac{1}{3}$

## ELECTIVES

The electives in the department of Horticulture may be taken from the following list or from any school or department in the College when approved by the adviser and dean:

## FALL QUARTER

	Hrs.	Cr.
Hort. 315, Sweet Potato Storage ..	1 (2)	1 $\frac{2}{3}$
Hort. 415, Forestry .....	3 (2)	3 $\frac{2}{3}$
Hort. 420, Greenhouse Practice ..	(9)	3
Hort. 423, Problems .....	(3)	1

## WINTER QUARTER

	Hrs.	Cr.
Hort. 318, Forcing Vegetables and Flowers .....	1 (4)	2 $\frac{1}{4}$
Hort. 418, Plant Materials in Landscape Gardening .....	3 (2)	3 $\frac{2}{3}$
Hort. 421, Greenhouse Prac. ....	(9)	3
Hort. 424, Problems .....	(3)	1

## SPRING QUARTER

	Hrs.	Cr.
Hort. 316, Veg. Judging .....	(4)	1 $\frac{1}{3}$
Hort. 317, Tree Surgery .....	1 (2)	1 $\frac{2}{3}$
Hort. 319, Spraying .....	1 (2)	1 $\frac{2}{3}$
Hort. 320, Canning and Handling of By-products .....	1 (2)	1 $\frac{2}{3}$
Hort. 419, Gen. Hort. ....	3 (2)	3 $\frac{2}{3}$
Hort. 422, Com. Veg. Gar. ....	(6)	2
Hort. 425, Problems .....	(3)	1

# POULTRY COURSE

## JUNIOR YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
P. H. 310, Poultry Judging .....	1	(6) 3	P. H. 312, Incu. and Brooding ...	1	(3) 2
Bot. 313, Genetics .....	4	4	A. H. 311, An. Nutrition .....	4	4
R. Econ. 309, Farm Accounts .....	1	(4) 2½	A. H. 430, Farm Meats .....	1	(4) 2½
Electives .....		7⅔	P. H. 314, Extension .....	2	2
			Electives .....		6⅔

## SPRING QUARTER

	Hrs.	Cr.
P. H. 313, Incu. and Brooding .....	1	(3) 2
P. H. 316, Poultry Problems .....	2	(6) 4
Hort. 312, Small Fruits .....	3	(2) 3⅔
R. Engr. 310, Farm Motors .....	3	(4) 4⅔
Electives .....		3

## SENIOR YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
P. H. 412, Adv. Judging .....	(6) 2		P. H. 413, Adv. Judging .....	(6) 2	
P. H. 414, Problems .....	2	(6) 4	P. H. 415, Problems .....	2	(6) 4
P. H. 417, Breeding .....	3	3	P. H. 418, Poultry Man. ....	2	2
Electives .....		8	Vet. Sci. 401, Poultry Dis. ....	2	(2) 2⅔
			Electives .....		6¼

## SPRING QUARTER

	Hrs.	Cr.
P. H. 416, Problems .....	2	(6) 4
P. H. 419, Poultry Man. ....	2	2
Agri. 402, Col. and Sta. Work .....	1	1
Electives .....		9

## ELECTIVES

The electives in the department of Poultry Husbandry may be taken from the following list or in any school or department in the College when approved by the adviser and dean:

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
P. S. 330, Adv. Pub. Spk. ....		3	Agron. 423, Com. Grades of Grain .....	(4)	1½
P. H. 311, Poultry Practice .....	(6) 2		P. H. 315, Practice .....	(6) 2	
P. H. 420, General .....	3	(4) 4⅔	R. Econ. 302, Agri. Marketing ...	3	3
			R. Econ. 306, Rural Life .....	3	3

## SPRING QUARTER

	Hrs.	Cr.
P. H. 317, Practice .....	(6) 2	
Zool. 408, Embryology .....	3	(6) 5
Hort. 417, Landscape Gar. ....	2	(2) 2⅔
R. Econ. 415, Extension Work .....	3	3
Eng. 236, Agri. Journalism .....	3	3

# RURAL ECONOMICS AND SOCIOLOGY

## JUNIOR YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
R. Econ. 301, Agricultural .....	3	3	R. Econ. 302, Marketing .....	3	3
Econ. 218, Prin. of Econ. ....	3	3	R. Econ. 309, Farm Accts. ....	1	(4) 2½
Electives .....		11	Electives .....		11⅔

## SPRING QUARTER

	Hrs.	Cr.
R. Econ. 308, Farm Organ. ....	2	(4) 3½
Electives .....		13⅔

## SENIOR YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
R. Econ. 408, Cost of Prod. ....	1	(4) 2½	R. Econ. 409, Adv. Farm Man. ....	3	(4) 4½
Electives .....		14⅔	Electives .....		12⅔

## SPRING QUARTER

	Hrs.	Cr.
R. Econ. 410, Eff. Marketing for		
Agri. ....	3	3
Electives .....		18

## ELECTIVES

The electives for graduates and undergraduates in the department of Rural Economics and

Sociology may be taken from the following list or in any school or department of the College when approved by the adviser and dean:

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
R. Econ. 411, Rural Life .....	3	3	R. Econ. 306, Agri. Statistics ..	2	2
Agron. 306, Forage Crops and Cotton .....	3 (4)	1½	Agron. 309, Man. and Ferts. ....	3 (4)	4½
R. Econ. 307, Land Econ. ....	3	3	A. H. 311, An. Nutrition .....	4	4
R. Econ. 413, Farm Finance .....	3	3	R. Soc. 305 .....	3	3
R. Econ. 412, Farm Movements ...	3	3			
SPRING QUARTER			Hrs.	Cr.	
R. Econ. 414, Agr. Hist. and Geog. ....	3	3			
R. Econ. 415, Ext. Work .....	3	3			
R. Engr. 310, Farm Motors .....	3 (4)	4½			
Agron. 307, Soil Fert. ....	3 (4)	4½			
Eng. 236, Agr. Journalism .....	3	3			

### AGRICULTURAL EDUCATION

#### JUNIOR YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Ed. 220, Psychology .....	4	4	Agron. 307, Soil Fert. ....	3 (4)	4½
Agron. 306, Forage Crops and Cotton .....	3 (4)	4½	A. H. 311, An. Nutrition .....	4	4
Bot. 313, Genetics .....	4	4	Dairy 313, Dairy Man. ....	2 (4)	3½
Electives .....		4½	R. Econ. 303, Farm Accts. ....	1 (4)	2½
			Electives .....		3
SPRING QUARTER			Hrs.	Cr.	
Ed. 322, Methods of Teaching .....	4	4			
Vet. Sci. 317, An. Diseases .....	4 (3)	5			
R. Engr. 310, Farm Motors .....	3 (4)	4½			
Hort. 313, Farm Forestry .....	3	3			
Electives .....		½			

#### SENIOR YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Agr. Ed. 424, Agr. Ed .....	4 (6)	6	Agr. Ed. 426, Prac. Teach. ....	1 (3)	2
Agr. Ed. 425, Prac. Teach. ....	1 (3)	2	A. H. 441, Livestock Man. ....	4 (4)	5½
P. H. 420, General .....	3 (4)	4½	R. Engr. 414, R. Problems .....	3 (4)	4½
A. H. 308, Types and Forms .....	1 (6)	3	Electives .....		5½
Electives .....		1½			
SPRING QUARTER			Hrs.	Cr.	
Agri. 402, Col. and Sta. Work .....	1	1			
R. Econ. 308, Farm Organ. ....	2 (4)	3½			
Hort. 312, Small Fruits .....	3 (2)	3½			
R. Econ. 404, Rural Life .....	3	3			
Eng. 236, Agr. Journalism .....	3	3			
Electives .....		2			

Three additional hours in Education required.

#### ELECTIVES

The electives in the department of Agricultural Education may be taken from the following list or in any school or department in the College when approved by the adviser and dean.

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Shop 341, Adv. Farm. ....	(3)	1	Shop 342, Ad. Farm .....	(3)	1
Ed. 326, Rural .....	3	3	Ento. 312, Teachers .....	3 (2)	3½
			Hort. 416, Plant Breeding .....	3	3
SPRING QUARTER			Hrs.	Cr.	
Shop 343, Adv. Farm .....	(3)	1			
Ed. 442, School Adm. ....	3	3			
Hort. 417, Landscape Gar. ....	3 (2)	3½			

Students completing the course in Agricultural Education are qualified to teach vocational agriculture in the high schools of the State receiving federal aid.

Students desiring a general course in agriculture but not wishing to qualify as teachers of vocational agriculture may take this course and substitute other subjects for those of a professional nature.

#### FOUR YEARS COURSE IN AGRICULTURAL ENGINEERING

Before a student is permitted to register for this course, he must present satisfactory credentials showing that he has performed at least 1,000 hours

of farm work. Before he will be granted his degree, the student must present satisfactory credentials showing the performance of at least 400 hours work in a trade, such as carpentry, masonry, foundry, forge and machine-shop, preferably at the beginning of the Sophomore year. Likewise must credentials be secured showing at least 200 hours as tractor or steam engine operator; or, failing in this, 300 hours actual service with a threshing crew, preferably at the beginning of the Junior year. One month in the department's field engineering camp will be required either at the beginning or end of the Senior year. The total requirements for graduation in this department is 216 credits, including Physical Education and Military Science.

The outline of courses is as follows:

### FRESHMAN YEAR

FALL QUARTER		WINTER QUARTER	
	Hrs.		Hrs.
Math. 112, College Algebra .....	3	Math. 115, Analytics .....	3
Math. 114, Trigonometry .....	3	Eng. 131, College .....	3
Eng. 130, College .....	3	Chem. 107, Inorganic .....	3 (3) 4
Chem. 106, Inorganic .....	3 (3) 4	Agron. 106, Crop Prod. ....	2 (2) 2½
A. H. 106, Market Types .....	2 (4) 3½	R. E. 107, Elements .....	(9) 3
Phys. Ed. 131 .....	(3) 1	Phys. Ed. 132 .....	(3) 1
Mil. Sci. 101 .....	(3) 1	Mil. Sci. 102 .....	(3) 1

SPRING QUARTER	
	Hrs.
Math. 116, Analytics .....	3
Eng. 132, College .....	3
Chem. 108, Inorganic .....	3 (3) 4
R. Econ. 101, General .....	4
C. E. 209 .....	1 (3) 2
Phys. Ed. 133 .....	(3) 1
Mil. Sci. 103 .....	(3) 1

### SOPHOMORE YEAR

FALL QUARTER		WINTER QUARTER	
	Hrs.		Hrs.
Math. 210, Calculus .....	3	Math. 211, Calculus .....	3
Physics 206, Advanced .....	3 (3) 4	Physics 207, Advanced .....	3 (3) 4
Chem. 219, Organic .....	3 (3) 4	Chem. 220, Quant. Agri. ....	2 (6) 4
M. E. 207, Kinematics .....	2	M. E. 208, Kinematic Draw. ....	(6) 2
Dairy 206, Dairy Cattle .....	2 (4) 3½	Agron. 206, Cereal Crops .....	3 (4) 4½
R. Engr. 207, Tillage Implants ..	1	Mil. Sci. 202 .....	(3) 1
Mil. Sci. 201 .....	(3) 1		

SPRING QUARTER	
	Hrs.
Math. 212, Calculus .....	3
Physics 208, Advanced .....	3 (3) 4
M. E. 209, Mechanisms .....	(6) 2
Agron. 207, Soils .....	3 (4) 4½
R. E. 208, Harvesters .....	1 (3) 2
Pub. Spk. 130, Essentials .....	3
Mil. Sci. 203 .....	1 (2) 1½

### JUNIOR YEAR

FALL QUARTER		WINTER QUARTER	
	Hrs.		Hrs.
C. E. 318, Applied Mech. ....	4	C. E. 319, Applied Mech. ....	4
M. E. 313, Mach. Design .....	(6) 2	M. E. 314, Mach. Design .....	(6) 2
M. E. 319, Laboratory .....	1 (3) 2	M. E. 320, Laboratory .....	1 (3) 2
R. Engr. 313, Automotives .....	(3) 1	Agron. 309, Man. and Fert. ....	3 (4) 4½
Hort. 415, Forestry .....	3 (2) 3½	R. E. 314, Dom. Engr. ....	1 (6) 3
Electives .....	5½	Electives .....	3

SPRING QUARTER	
	Hrs.
C. E. 320, Applied Mech. ....	4
M. E. 318, Thermodynamics .....	3
M. E. 321, Mech. Lab. ....	1 (3) 2
M. E. 315, Mach. Design .....	(6) 2
Hort. 417, Landscape Gar. ....	3 (2) 3½
Electives .....	3

## SENIOR YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
M. E. 426, Steam Engines .....	3	3	M. E. 427, Steam Turbines .....	3	3
E. E. 434, Electric Mach. ....	3	3	E. E. 436, Elec. Mach. ....	3	3
C. E. 418, Structural Design ....	1 (6)	3	E. E. 311, Elec. Mach. ....	(6)	2
R. E. 417, Land Reclamation .....	2	2	C. E. 419, Struc. Design .....	1 (6)	3
Agron. 314, Soil Survey .....	1 (4)	2½	Bact. 202, General .....	3 (4)	4½
Dairy 427, Dairy Mach. ....	2	2	Electives .....		3
Electives .....		3			

## SPRING QUARTER

	Hrs.	Cr.
M. E. 428, Internal Comb. Engines .....	3	3
Agron. 308, Soils and Ferts. ....	3 (4)	4½
E. E. 438, Elec. Mach. ....	3	3
E. E. 313, Elec. Mach. ....	(6)	2
R. E. 415, Rural Arch. ....	(6)	2
R. E. 416, Public Roads .....	2	2
Electives .....		1½

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## DEPARTMENT OF AGRONOMY

....., *Professor.*ADRIAN DAANE, *Associate Professor.*GLEN BRIGGS, *Associate Professor.*H. F. MURPHY, *Assistant Professor.*....., *Instructor in Secondary Vocational Agronomy.*

The course in agronomy has been designed to familiarize the student with the principles underlying soils and crop production. It offers practical training in these modern fields of science, aiding student to solve the problems of farm life, and fitting them for educational and research work.

The subject matter of these courses comprises the most recent information and experimental data. While the conditions in different sections of Oklahoma are given special consideration, yet the instruction is not intended to be limited geographically.

The courses of instruction in this department are coordinated with the courses in animal husbandry, horticulture, entomology, and agricultural education. By this arrangement, and the electives allowed, the student will be able to get a comprehensive knowledge of the three large branches of agricultural science—the soil, the plant and the animal. And, too, the student has an opportunity to secure a more general education in agriculture fitting him for general farming and extension work, or he may specialize in either division of the Agronomy Department, soils or crops.

The work in the department is two-fold: First, to fit young men successfully to solve problems of soils and crops, which are an integral part of every farmer's experience; second, to fit students creditably to fill positions in agricultural colleges, experiment stations and high schools, and as extension workers.

The Station farm used by the Department of Agronomy con-

sists of 160 acres of medium rolling land, well situated for experimental and demonstration work. It is well equipped with all kinds of farm machinery necessary in crop production.

The general field and experimental plats of the Experiment Station, used for improving and testing farm crops and for conducting experiments in methods of soil management, afford the student excellent opportunities for study and investigation.

The large, well-equipped laboratory for soil physics and soil fertility work is maintained for the regular use of students.

A research laboratory is well supplied with necessary apparatus for the use of the instructors and advanced students in doing research work.

The crops laboratory is well equipped with material and specimens for a detailed study of the different cereal, forage and fiber crops.

### *SUBJECTS*

106 CROP PRODUCTION. Class 2 hours, laboratory 2 hours. Credit 2%.

This is an introductory course dealing with the classification and geography of farm crops. It also includes a study of those general factors which affect production.

No text is used.

Required of all Agricultural students.

206 CEREAL CROPS. Class 3 hours, laboratory 4 hours. Credit 4⅓.

A study of the characteristics, adaptation, preparation of the seedbed, culture and uses of the various cereal crops, adapted to Oklahoma conditions. The laboratory work is devoted largely to a study of the various cereal grains and cereal judging.

Text: "The Small Grains," Carleton .

Prerequisite: Agronomy 106.

Required of all Agricultural students.

207 SOILS. Class 3 hours, laboratory 4 hours. Credit 4⅓.

A general introductory course dealing with the origin, formation, classification and physical properties of soils. Particular emphasis is placed upon the effect of soil management on moisture, drainage, erosion, aeration, and heat.

Prerequisite to all other soil courses.

Text: "Soils, Their Properties and Management," Lyon, Fippin & Buckman.

306 FORAGE CROPS AND COTTON. Class 3 hours, laboratory 4 hours. Credit 4⅓.

This work takes up the history, development, growth, distribution, culture, uses and improvement of forage crops suitable for pasture, hay, silage, soiling and grain, including sorghums, alfalfa, other legumes, annual and biennial grasses. In the laboratory a study is made of the plant and the seed of different varieties and their common adulterations, with reference to their identification, quality and purity. Cotton work consists of variety, cultural, breeding and improvement studies of the cotton suitable for this State. Laboratory work consists of judging seed cotton and stalk characteristics.

Special emphasis given to the handling of these crops under Oklahoma conditions.

Texts: "Forage Crops." Piper; "Field Crops for the Cotton Belt," Morgan.

Prerequisite: Agronomy 106.

Required of all Agricultural students.

**307 SOIL FERTILITY.** Class 3 hours, laboratory 4 hours. Credit  $4\frac{1}{3}$ .

This course is designed to meet the demands for the students in general agriculture. A study is made of the composition, care, and use of manures and fertilizers, and the fertility of the soil as related to permanent agriculture.

**308 SOIL FERTILITY.** Class 3 hours, laboratory 4 hours. Credit  $4\frac{1}{3}$ .

A course treating of the general principles underlying the maintenance of a permanent system of agriculture. Various fertilizer experiments relating to permanent soil improvement are studied. Fertility studies are made in the laboratory of soils taken from the home farm of the student.

Prerequisite: Agronomy 309.

Text: "Soil Fertility and Permanent Agriculture," Hopkins.

**309 MANURES AND FERTILIZERS.** Class 3 hours, laboratory 4 hours. Credit  $4\frac{1}{3}$ .

A course dealing primarily with the composition and care of fertilizers with particular emphasis placed on the care of farm manures. Commercial fertilizers, both complete and incomplete, are studied from the standpoint of relative prices, composition, and mixing. The merits of fertilizer laws are discussed.

Text: "Manures and Fertilizers," Wheeler.

**310 FIBER CROPS.** Class 3 hours, laboratory 4 hours. Credit  $4\frac{1}{3}$ .

Production, varieties, breeding, harvesting, and marketing of the cotton crop will be considered in detail. The laboratory work consists of a study of variety and stalk characteristics, grading and stapling of Oklahoma cottons, together with field work. Other fiber crops such as flax and hemp will be given secondary consideration in this course.

Text: "Cotton Trade Guide and Students Manual," Miller.

Reference: "Field Crops for the Cotton Belt," Morgan.

Prerequisite: Agronomy 106.

Required of all Agronomy students.

**311 GRAIN JUDGING.** Laboratory 4 hours. Credit  $1\frac{1}{3}$ .

This course is designed to give the student an understanding of the factors that should be considered in determining quality in seeds. The work consists largely in judging various field seeds.

No text.

Prerequisite: Agronomy 206 and 306.

Required of Agronomy students.

**312 ADVANCED GRAIN JUDGING.** Laboratory 6 hours. Credit 2.

This course is a continuation of Agronomy 311.

No text.

**313 WEEDS AND SEED TESTING.** Class 1 hour, laboratory 4 hours. Credit  $2\frac{1}{3}$ .

This course includes a study of the more important economical farm seeds in Oklahoma, identification of seeds and varieties, seed analyses, fumigation methods to exterminate insects from grain, treatment of seeds for smut and the Oklahoma seed law. Weeds will be studied with reference to the weed problems of Oklahoma, methods of introduction, means of combating them, as well as a study of their seeds so that it will be possible to recognize them when occurring in farm seeds. A collection of farm seeds

and weeds, such as will be valuable to every student who expects to do county agent work or to teach agriculture, will be required in the laboratory work.

Text: "Weeds." Iowa Geological Survey, Pammel.

Reference: "Manual of Weeds," Ada Georgia.

**314 SOIL SURVEY.** Class 1 hour, laboratory 4 hours. Credit  $2\frac{1}{3}$ .

Methods used in classifying soils are discussed. The soils of the United States, and particularly the soils of Oklahoma, and the Southern states are studied. Laboratory work consists of making a soil survey of surrounding territory.

Text: "The Soils and Agriculture of the Southern States," Bennett.

**426 SPECIAL CROPS.** Class 2 hours. Credit 2.

This course is given to familiarize the student to a certain extent with several special crops such as rice, tobacco, sugar cane, sugar beets, other root crops, etc., that are not included in other courses. The work will be given in lectures and by special assignments and will be largely limited to adaptation, culture and uses of the various crops.

**427 CROP IMPROVEMENT.** Class 1 hour, laboratory 4 hours. Credit  $2\frac{1}{3}$ .

This is an advanced course in cereal and forage crops dealing with factors affecting management, improvement and breeding. The laboratory is partly devoted to the collection, reading and classification of literature concerning cereal and forage crop improvement. When conditions permit, the laboratory work consists chiefly of actual work on the principal crops that are being improved on the Station farm.

Text: "Breeding Crop Plants." Hayes and Garber.

Prerequisite: Agronomy 206, 306, and 308.

Required of all Agronomy students.

**428 DRY-LAND FARMING.** Class 2 hours. Credit 2 hours.

Systems of soil management used in semi-arid and arid regions are studied with particular stress placed on a larger crop yield and at the same time a maintenance of the fertility of the soil.

Text: "Dry Farming," Widtsoe.

**429 ADVANCED SOILS.** Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{3}$ .

Physical or chemical study of special soils in which the student is especially interested. Centrifugal analysis, time and depth of cultivation, moisture and temperature, surface washing and prevention, determination of limiting elements of plant food on the home farm, effect of various fertilizers, as determined by pot and field experiments. Study of fertility experiments at other stations.

Prerequisite: Agronomy 308 and 309.

Agronomy 434 or Agronomy 429 required of Agronomy students.

**430 SPECIAL GRAIN JUDGING.** Laboratory 6 hours. Credit 2.

This is a course planned to meet the demands of those students who desire to fit themselves for grain judging work and to determine quality in seeds. Work also is given in identification of varieties.

No text.

Prerequisite: (Grain Judging) Agronomy 311.

**431 COMMERCIAL GRADES OF GRAIN.** Laboratory 4 hours. Credit  $1\frac{1}{3}$ .

Grading and inspecting of grains are taken up in the laboratory. Actual work in determining the commercial grade of samples of wheat, corn, oats, barley and grain sorghums is given.

Prerequisite: Agronomy 311.

## 432 SEMINAR. Class 2 hours. Credit 2.

Reports, discussions and papers will be called for on literature and scientific research along agronomic lines.

Required of all Agronomy students.

## 433 SEMINAR. Class 2 hours. Credit 2.

Reports, discussions and papers reviewing recent soil literature are required.

No text.

Required of all Agronomy students.

## 434 ADVANCED CROPS. Class 2 hours, laboratory 4 hours. Credit 3½.

This course takes up more advanced work in the production of the important crops throughout the United States. Emphasis is placed on more detailed study of the various plants that go to make up the cereal and forage crops of the United States.

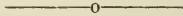
Prerequisite: Agronomy 206, 305, 308 and 309.

## 435-436-437 AGRONOMY PROBLEMS. Hours to be arranged and credit given accordingly.

This is an advanced course, each student being required to work out some special soil or crop problem approved by the Department. A written report of the work is required at the completion of the problem. Most likely, to complete the problem, more than one term's work will be necessary.

Prerequisite: Agronomy 206, 306, 308 and 309.

No text.



## DEPARTMENT OF ANIMAL HUSBANDRY

W. L. BLIZZARD, *Professor.*

CARL P. THOMPSON, *Associate Professor.*

A. E. DARLOW, *Assistant Professor.*

FRED J. BEARD, *Instructor in Secondary Vocational Animal Husbandry.*

ALEX LAVIN, *Herdsmen.*

E. R. JONES, *Herdsmen.*

FRANK BAYLISS, *Herdsmen.*

FELIX ROY, *Herdsmen.*

A. E. BASTION, *Farm Foreman.*

The Department of Animal Husbandry gives instruction in all lines of practical and theoretical work which deals with judging, selecting, breeding, feeding, development, care and management of the various market and breed types of farm animals. The livestock industry in Oklahoma is the most important industry in the State, and for this reason the department is attempting to supply adequate instruction to meet the demands for work of this character.

### EQUIPMENT

The equipment in the form of flocks and herds, barns and out-buildings, land and lots is rather complete. These make up the laboratories for this department. That the herds and flocks contain animals of unusual merit is shown by recent winnings at the best livestock shows in the country. A steady improvement in the livestock is being made.

The books in the libraries of the College, Experiment Station and department assist students greatly in securing authentic information about livestock affairs. The department receives regularly copies of all the prominent livestock papers and periodicals. Special effort has been made to secure a complete list of herdbooks and animal husbandry reference literature. The material at hand enables students to become specialists in many lines of the animal industry.

### COURSES

Judging and selection is one of the main factors of the livestock work. The instruction is given with the idea that a great deal of good practice makes a proficient judge. Much time is given to work with the animals at the barns. The score card method is used at first. In this way every point that affects the value of the animal is discussed in detail. Different breeds and types have different score cards, and by the use of all these cards students become proficient in the use of the score card. The comparative system consists in placing a class of animals in order of merit. Three or four or more animals are used as a class. Fifty percent is given to perfect placing and fifty percent for correct reasons for placing. The senior and postgraduate students are trained in judging so that they may, upon completing the course, assist in judging at the various county and state fairs.

Breeding, feeding and management are important courses of the instruction. Several breeding experiments are in progress at the Experiment Station. Students work out the details of the experiments and thereby become acquainted with the fundamental principles governing this science. Senior students are required to spend eight hours each week throughout the year in feeding the hundreds of head of livestock at the College. The feeding work is carefully supervised by the best trained instructors and herdsmen.

Livestock management is one of the principal courses on the schedule. Students are taught that good management is more necessary than theories and fancies.

The main aim of the work given the student is to train him to fill some of the fields in which there is a great demand. A combination of college training and practical experience works well in making the best men. Colleges and experiment stations, government agencies, farmers, merchants and all commercial agencies that buy

and sell the farmer's produce, need men trained as this College is training them.

### *BEEF CATTLE*

The beef cattle section of the Animal Husbandry Department is represented by three breeds, the Hereford, Shorthorn and Aberdeen Angus. Good representatives of each breed are maintained, and the course of study is arranged to give the student practical instruction in selection, feeding, breeding, marketing, care and management. In addition to the breeding herd, the College maintains a steer herd. It is maintained because it is much easier to keep steers in high condition throughout the year, as there is a tendency to make non-breeders of breeding cattle by keeping them in the high condition required for the best instruction work. The recent winnings of the cattle show that the present equipment is exceedingly good.

### *HORSES*

The horse section of the Animal Husbandry Department is represented by two breeds. Among these are good representatives of the Percherons and Standard-breds. In the collection of Percheron mares some excellent specimens are found. The Standard-breds also are represented by good individuals. This collection of horses was established some time ago, and, with the individuals that have been added to it, gives the student an excellent opportunity to receive some real practical work with horses.

### *SHEEP*

The equipment for sheep consists of a barn and two silos, valued at \$2,500, besides several moderate-sized pasture fields. The breeding flocks total about 100 select individuals. All sheep are owned by the Experiment Station, and are used in the cross-breeding experiment that was started in 1909. Purebred flocks of Shropshires, Dorsets, American Merinos and Rambouillets are maintained and afford excellent material for instruction in the types and breeds of sheep in connection with the work in practical sheep-judging. Thorough courses are offered in the study of market types and breed types of sheep, together with special sheep selection, production and management.

### *SWINE*

The collection of swine outnumbers that of any other section

of the Animal Husbandry Department. Several breeds are represented. There are more Duroc Jerseys than any other breed. A number of Poland Chinas, and Hampshires are kept. About fifty grade hogs are used, mainly for experimental purposes. In all, the number of swine on hand ranges from 175 to 200.

*SUBJECTS*

106 MARKET TYPES OF LIVESTOCK. Fall Quarter. Class work 2 hours, practice in judging 4 hours. Credit  $3\frac{1}{3}$ .

This course consists of a study of the market types, classes and grades of horses, cattle, sheep and swine.

Text: "Types and Market Classes of Livestock," Vaughn.

206 BREEDS OF LIVESTOCK. Spring Quarter. Class work 3 hours, practice 4 hours. Credit  $4\frac{1}{3}$ .

Characteristics of each breed of horses, cattle, sheep, swine and jacks are considered at length. Each breed is discussed with reference to its origin, history, development and adaptation to American conditions. Much emphasis is put on the practical work in judging representatives of the various breeds according to the standards set by the show ring.

Prerequisite: A. H. 101.

Text: "Types and Breeds of Farm Animals," Plumb.

310 LIVESTOCK RECORD WORK. Spring Quarter. Class work 1 hour, laboratory 4 hours. Credit  $2\frac{1}{3}$ .

A study of the systems of livestock registration, the use of herd books, the tracing of pedigrees, and the leading blood lines of horses, cattle, sheep and swine.

Prerequisite: A. H. 106, 206, 202.

Text: Herd Record Books.

309 LIVESTOCK JUDGING. Winter Quarter. Class work 1 hour, practice in judging 6 hours. Credit 3.

A practical course aimed to train the student to become proficient in livestock judging. The first part of the work consists of the use of the score card as applied to the different types and breeds. The major portion of the work is done by the method of comparative judging, using rings of from three to five animals.

Prerequisite: A. H. 106, 206, 308.

Text: "Judging Farm Animals," Plumb.

308 TYPES AND FORM IN JUDGING LIVESTOCK. Fall Quarter. Lecture 1 hour, laboratory 6 hours. Credit 3.

Prerequisite: A. H. 106, 206.

Detailed and specific study is made of animal form and type and the influence of this upon growth and development. All classes of livestock are studied in this course with special reference to their growth and development.

Text: "Judging Livestock," John A. Craig.

311 ANIMAL NUTRITION. Winter Quarter. Class 4 hours. Credit 4.

Principles of animal nutrition; composition and digestibility of various feeds; balanced rations; economical feeding of animals for various purposes.

Text: "Feeds and Feeding," Henry and Morrison.

429 LIVESTOCK SELECTION. Fall Quarter. Class 1 hour, practice in judging 8 hours. Credit  $3\frac{2}{3}$ .

This course deals with the judging of market classes as well as the dif-

ferent breeds of purebred stock. During the work of the semester, occasional trips are made to the best livestock farms of the State, where students have an opportunity to judge and to observe the management of herds and flocks. Students are urged to attend county and state fairs to observe the judging of livestock.

Prerequisite: A. H. 106, 206, 308, 309.

Required of students who are candidates for judging teams.

Text: Assigned references.

432 BEEF PRODUCTION. Fall Quarter. Class work 3 hours, laboratory 2 hours. Credit 3%.

Prerequisite: 106, 206, 311.

This course includes a study of method of growing and producing market cattle, also the feeding, care and management and marketing of purebred cattle. The laboratory includes practical work in feeding, management and care of cattle.

Text: "Beef Production." Mumford.

427 SWINE PRODUCTION. Winter Quarter. Class work 3 hours, laboratory 2 hours. Credit 3%.

Prerequisite: A. H. 106, 206, 311.

This course takes up a study of economic methods of feeding swine for breeding purposes as well as for market. Laboratory work includes actual practice in feeding, management and care of swine.

Text: "Pork Production." W. W. Smith.

428 SHEEP PRODUCTION. Spring Quarter. Class work 3 hours, laboratory 2 hours. Credit 3%.

Prerequisite: A. H. 106, 206, 311.

Systematic study is made of the methods of growing, fitting and finishing sheep for market. The purebred methods are also discussed in this course.

Text: "Productive Sheep Husbandry," Coffey.

431 HORSE PRODUCTION. Spring Quarter. Class work 3 hours, laboratory 2 hours. Credit 3%.

Prerequisite: A. H. 106, 206, 311.

This course includes a study of the best methods of growing and marketing, care of horses, for work, for market; also purebred horses. Laboratory work includes practical work in feeding, handling and general care of purebred horses.

Text: "Productive Horse Husbandry," Gay.

426 ANIMAL BREEDING. Fall Quarter. Class work 4 hours. Credit 4.

Prerequisite: A. H. 106, 306, 310.

This course consists of a study of the physiology of reproduction; general principles of heredity; variations; methods and problems of breeders; influence of pedigrees, herd books, etc.; and study of Mendelism.

433 STOCK FARM MANAGEMENT. Spring Quarter. Class work 2 hours, laboratory 2 hours. Credit 2%.

This includes a study of the principal stock farms in the State with a discussion of the methods and practices followed regarding management and sales. Study will also be made of some of the leading stock farms of the country.

Text: Special assignments.

430 FARM MEATS. Winter Quarter. Class work 1 hour, laboratory 4 hours. Credit 2%.

This course consists of actual slaughtering, dressing, cutting and curing of all classes of meat animals.

Text: Special references.

- 435 ANIMAL HUSBANDRY SEMINAR. Fall Quarter. Class work 2 hours. Credit 2.

Open to seniors and graduates. Special assignments are made in this course, and the course is designed to give an insight into the animal husbandry field. An original report is required in these courses.

Prerequisite: 106 A. H., 206 A. H., 311 A. H., A. H. 310.

- 436 ANIMAL HUSBANDRY SEMINAR. Winter Quarter. Class work 2 hours. Credit 2.

Continuation of 435.

- 437 ANIMAL HUSBANDRY SEMINAR. Spring Quarter. Class work 2 hours. Credit 2.

Continuation of 436.

- 444 LIVESTOCK MANAGEMENT AND MEATS. Winter Quarter. Class 4 hours, laboratory 4 hours. Credit 5½.

Prerequisite: Animal Nutrition 311.

This course is designed for students who are specializing in general agriculture. It takes up in a brief way the general management and care of livestock. A study will be made of the best bloods for the production of the various types of animals. Some practical work will be given in killing, and cutting the various types of meat animals.

#### ELECTIVE COURSES

- 438 ADVANCED PEDIGREES. Fall Quarter. Laboratory 6 hours. Credit 2.

Pedigrees are traced five generations. Tabulation and study is also made of their show year record in this course. The families are given special stress in this work.

- 439 MARKETING LIVESTOCK. Winter Quarter. Class work 3 hours. Credit 3.

In this course, study is made of marketing livestock and livestock products. The problems of the shipper and producer; problems of freight, insurance, charges and commissions; effects of grain and other feeds on the value of livestock also are discussed.

- 443 PRODUCING AND MARKETING WOOL. Spring Quarter. Class work 3 hours. Credit 3.

This course includes a study of the supply of wool and the market for the same. Methods of producing, marketing, storing and grading and by-products are taken up in this course.

- 442 ADVANCED MEATS. Winter Quarter. Class work 2 hours, laboratory 4 hours. Credit 3½.

Prerequisite: Farm Meats.

This course includes a study of different grades of carcasses and meats; study of the factors which influence the quality of meats; factors influencing dressing percentage and the identification of meats from different animals.

- 440 ADVANCED FEEDING. Spring Quarter. Class work 3 hours. Credit 3.

Prerequisite: Animal Nutrition.

This course includes a survey of the experimental work of the different classes of livestock and a study of the practical experimental methods used and their application to various sections of the country.

#### FOR GRADUATES

- 505-506-507 RESEARCH IN ANIMAL HUSBANDRY. Fall, Winter and Spring Quarters. Amount of work, six to eight quarter credits.

Students are assigned special problems for investigation on Beef Cattle Production, Horse Production, Sheep Production, Swine Production and Meats.

## DEPARTMENT OF DAIRYING AND DAIRY HUSBANDRY

A. C. BAER, *Professor.*  
A. D. BURKE, *Associate Professor.*  
H. E. DOTY, *Instructor and Foreman of Factory.*  
E. R. LAWRENCE, *Instructor in Vocational Dairying.*  
O. C. COOPER, *Assistant and Herdsman.*  
L. F. FRAZIER, *Assistant in Official Cow Testing.*  
J. D. POLLARD, *In Charge of Office.*

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The Dairy industry in Oklahoma is firmly established and continued progress is being made in getting more and better cows. Breeders of dairy cattle are improving their herds by the use of better sires and official testing. Manufacturers of dairy products have all installed modern machinery and many new modern factories have been built.

Students and graduates will have unusually good opportunity both in dairy farming and dairy manufacturing. Technically trained men for the modern dairy farm, the market milk plant, creamery, ice cream factory or in city milk inspection service, always are in demand.

The courses in dairying are planned to give the students a general knowledge of the subject of dairying as well as specialized and technical training in dairy production and dairy manufacture.

The facilities for instruction include a new modern dairy barn, completely equipped and stocked with dairy cattle of four breeds. The dairy barn is in charge of a competent herdsman. Students have an opportunity to become familiar with all problems of Dairy Husbandry and the practical management of a dairy herd and dairy farm as well as receiving complete instruction in Dairy Cattle Judging.

The creamery building is equipped with modern, sanitary machinery and apparatus for manufacturing butter, ice cream, cottage cheese and buttermilk on a commercial scale. Market milk equipment for bottling milk and pasteurizing milk is in daily use to supply the city of Stillwater with dairy products. A retail milk delivery wagon covers the entire city daily.

The farm dairy-room and laboratories are well equipped for the teaching of students in all courses.

The activities of the department include the teaching of students in the regular and short courses, the commercial operation of the creamery and market milk departments for experimental and research work, as well as for practical teaching, and the operation of a dairy farm for the breeding of dairy cattle and for the pro-

duction of milk. The department also has charge of official advanced registry and register of merit testing of purebred cows for breeders of the State. Students taking the dairy course have an opportunity to secure experience and instruction in all the activities of the department.

*SUBJECTS*

106 ELEMENTS OF DAIRYING. Fall Quarter. Class 3 hours, laboratory 4 hours. Credit  $4\frac{1}{3}$ .

A general survey of the field of dairying, the Babcock test for milk and cream, farm dairying including farm buttermaking, farm separators and care of milk and cream on the farm.

Text: "Manual of Milk Products," Stocking.

206 DAIRY CATTLE. Fall Quarter. Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{3}$ .

A study of dairy cattle including elementary work in judging, breeding, care, feeding and management, economic factors in milk production.

Text: "Productive Dairying," Washburn.

308 MILK INSPECTION. Fall Quarter. Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{3}$ .

A practical course in the analysis of milk from a public health and sanitary standpoint, also including the calibration of glassware, tests for adulteration, preservative tests, fermentation tests, bacteriological tests, acidity tests, detection of oleomargarine, renovated butter, etc.

Text: "Milk," Heineman.

309 DAIRY PRODUCTS ANALYSIS. Winter Quarter. Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{3}$ .

An advanced course in the testing of dairy products, which includes a thorough study of the use of the Babcock test and the analysis of cream, skim milk, buttermilk, butter, cheese, condensed milk, ice cream and milk powder. Also special work on gelatine and all the products entering into the manufacture of ice cream.

Text: "Milk," Heineman.

310 ICE CREAM MAKING. Spring Quarter. Class 3 hours, laboratory 6 hours. Credit 4.

The commercial manufacture of ice cream including standardization of mixes, pasteurization and processing of mixes, a study of overrun, solids and food value of ice cream, refrigerating machines and plant management; practical work in factory work.

Text: "The Book of Ice Cream," Fisk.

311 BUTTERMAKING. Winter Quarter. Class 2 hours, laboratory 6 hours. Credit 4.

A complete study of creamery buttermaking, including cream buying, sampling and testing, neutralization, pasteurization, churning, packing and marketing of butter; factory methods and accounts and creamery buildings and plant management.

Text: "The Butter Industry," Hunziker.

312 DAIRY CATTLE JUDGING AND MANAGEMENT. Fall Quarter. Class 3 hours, laboratory 4 hours. Credit  $4\frac{1}{3}$ .

Judging dairy cattle, types and breeds; practical management of dairy

herds for milk production and breeding purposes; calf raising and building up dairy herds; feeding of dairy cows.

Text: "Dairy Cattle and Milk Production." Eckels.

**313 MILK PRODUCTION AND DAIRY MANAGEMENT.** Winter Quarter. Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{2}$ .

For students electing the general agricultural course.

A condensed course including general work in judging types and breeds of dairy cattle, general management of dairy herds, feeding for milk production, raising of calves and young stock, cow testing associations and official testing.

Text: "Dairy Cattle and Milk Production," Eckels. "The Feeding of Dairy Cattle," Larsen and Putney.

**414 BREED JUDGING AND RECORDS.** Fall Quarter. Class 3 hours, laboratory 4 hours. Credit  $4\frac{1}{3}$ .

Judging of breeds of dairy cattle, a thorough study of the history and development of breeds, pedigrees and records of the various breeds, official testing and breed requirements.

Text: To be selected.

**415 FERMENTED MILK.** Fall Quarter. Class 1 hour, laboratory 4 hours. Credit  $2\frac{1}{3}$ .

A practical course for city milk supply work, treating especially of different methods of handling the surplus in city milk plants. Work is given in the manufacture of commercial buttermilk, kumiss, kefir, matzon, yogurt, bacillac, cottage cheese, buttermilk cheese, casein, milk powder and condensed milk.

Text: To be selected.

**416 MARKET MILK.** Winter Quarter. Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{3}$ .

A study of the production and handling of market milk, which treats of the various processes through which milk passes from producer to consumer. Clarification, pasteurization, cooling, bottling, etc.

Text: "City Milk Supply," Parker. "Marketing of Whole Milk," Erdman.

**417 CHEESE MAKING.** Spring Quarter. Class 2 hours, laboratory 8 hours. Credit  $4\frac{2}{3}$ .

Modern methods of factory cheese making, including practical instruction in the manufacture of cottage cheese, limburger, cheddar and swiss cheese.

Text: "The Book of Cheese," Thom and Fisk.

**418 CITY MILK SUPPLY.** Spring Quarter. Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{3}$ .

A practical course in the organization, establishment and control of municipal milk inspection work from a public health and sanitary standpoint. Preparation of ordinances, field inspection, etc.

Text: "City Milk Supply," Parker; "Marketing Whole Milk," Erdman.

**419 MILK PRODUCTION.** Winter Quarter. Class 3 hours, laboratory 4 hours. Credit  $4\frac{1}{3}$ .

A study of methods of milk production on different types of dairy farms; methods of marketing and utilization of by-products, organization of dairy farms. The feeding and care of cows for milk production and official records.

Text: "Feeding of Dairy Cattle," Larsen and Putney.

**420 DOMESTIC DAIRYING.** Winter Quarter. Class 2 hours, laboratory 2 hours. Credit  $2\frac{2}{3}$ .

Elective for junior and senior home economics.

The care of milk and cream in the home, the Babcock test of milk and cream, milk production on the farm; farm buttermaking; separators; ice cream making; sanitary milk production, milk dietetics and hygiene; milk pasteurization.

Text: "The Story of Milk," Frederickson; and references.

421 SEMINAR. Fall Quarter. Class 2 hours. Credit 2.

Students will prepare topics on subjects relating to problems of special interest to them thus affording an opportunity for a more complete study of certain phases of dairy work.

422 SEMINAR. Spring Quarter. Class 2 hours. Credit 2.

Similar to work of 421.

423 DAIRY PROBLEMS. Fall Quarter. Credit 2.

Special assigned problems in dairying including either a problem in dairy manufacturing or dairy production. Students will be required to write a thesis covering a thorough investigation of the assigned subject.

424 DAIRY PROBLEMS. Winter Quarter. Credit 2.

Either a continuation of a problem begun during the Fall Quarter or a new problem.

425 DAIRY PROBLEMS. Spring Quarter. Credit 2.

Either a continuation of a problem begun in the Fall or Winter Quarter or a new problem.

314 DAIRY CATTLE PEDIGREES. Winter Quarter. Credit 2.

For students desiring a more complete study of dairy pedigrees or to study certain lines of breeding—assigned work.

315 JUDGING DAIRY PRODUCTS. Fall Quarter. Credit 2.

Practice work in judging butter, cheese, market milk, ice cream and buttermilk.

For students specializing in dairy manufacture and to prepare a dairy products judging team.

426 DAIRY MARKETS. Spring Quarter. Credit 2.

A study of dairy products markets of the world—exports and imports and general factors governing prices of dairy products.

For the preparation of students to assume positions as marketing experts. (Students electing this course should have a fundamental knowledge of general marketing.)—Assigned work.

427 DAIRY MACHINERY. Fall quarter. Credit 2.

A special study of all kinds of dairy machinery, apparatus and conveniences for handling dairy products. Practical work in installing and repairing machines and in operating machines.

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## DEPARTMENT OF ENTOMOLOGY

C. E. SANBORN, *Professor*.  
W. E. JACKSON, *Assistant Professor*.

The courses of instruction are arranged to meet:

1. The requirements of agricultural students who desire to have practical information relative to the control of injurious insects of the farm, orchard and garden.

2. Requirements of students who desire to obtain a broader scope of entomology than above mentioned, for the purpose of demonstration work.

3. Requirements of students who desire to teach entomology in public schools.

4. Requirements of students who desire to specialize in horticultural entomology.

5. Requirements of those who desire to specialize in entomology for the purpose of preparing themselves as nursery and orchard inspectors, or for positions in colleges and universities, or in Federal work.

Work can be taken in this department leading to a master's degree.

The Experiment Station side of entomology is a closely allied division, and much of the practical side of the work taken by students can be gained through frequent assistance in the Experiment Station work of the department.

In addition to the regular well equipped class laboratory, there is a Station laboratory located in the Apiary building to which students have frequent access for the purpose of becoming familiar in the most practical way with apiary equipment, insecticides, spray machinery, and with all other kinds of apparatus used for controlling insects.

### SUBJECTS

206 GENERAL ENTOMOLOGY. Spring Quarter. Class 4 hours, field and laboratory 2 hours. Credit 4 $\frac{2}{3}$ .

A systematic study of insects, and a study of their distribution, habits and methods of development with a view of ascertaining methods of control. Text: Sanderson & Peairs.

310 APICULTURE. Spring or Summer Quarter. Class 3 hours, field and laboratory 2 hours. Credit 3 $\frac{1}{3}$ .

A general course in beekeeping. Each student is required to obtain a colony of bees for practice work.

311 HORTICULTURAL ENTOMOLOGY. Spring Quarter. Class 3 hours, field and laboratory 2 hours. Credit 3 $\frac{2}{3}$ .

Habits and distribution of orchard and garden insects, studied in such a way as to portray the most practical methods of controlling them. Modern types of spray machinery and equipment will be studied and used in spraying as a part of the practicum.

Text: By assignment.

312 TEACHERS COURSE. Fall or Spring Quarter. Class 3 hours, field and laboratory 2 hours. Credit 3 $\frac{2}{3}$ .

A brief systematic study of insects and a study of their life history and

habits. Methods for conducting class work, projects in insect investigations and control.

Text: By assignment.

426 ADVANCED ENTOMOLOGY. Class, field and laboratory work by assignment.

For graduates and undergraduates.

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## DEPARTMENT OF HORTICULTURE AND FORESTRY

F. M. ROIFS, *Professor.*

W. A. RADSPINNER, *Assistant Professor.*

EARL D. MARKWELL, *Assistant Professor.*

CHRISTIAN JENSEN, *Assistant in Forestry and Landscape Gardening.*

S. SMITH, *Florist.*

F. R. DARROW, *Foreman.*

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The courses offered in this department are designed to give the student a thorough knowledge of the most important lines of horticultural work. Instruction consists of lectures, recitations and practical exercises in the laboratory and field.

The facilities for instruction include lecture rooms, reading room, laboratory, implement house, and a practical work room; orchards of a number of leading varieties of fruits and nuts, plantings of vegetables, a small nursery, a cellar, greenhouse, hot beds, and cold frames. The department also is well equipped with tools, implements and apparatus for giving practical work.

The office, laboratory and classroom are located on the third floor of Morrill Hall. The office and horticultural reading room are combined. The room contains a number of the leading magazines, journals and reference works pertaining to horticulture, as well as a set of Station and United States Government publications. It is intended for the use of students specializing in horticulture, to give them a broader view of the subject and to keep them in touch with current horticultural information. The laboratory is well equipped with modern apparatus for horticulture research work.

The greenhouses on the College campus are used in growing ornamental plants, cut flowers and vegetables for instructional work.

The implement shed, work room, cellar, cold frames and propagating beds are located on the horticultural grounds. The work room is supplied with packing tables, work benches, and other equipment for instructional work. The department is well equipped for giving practical instruction in the various methods of plant propagation; the study of buds and twigs of fruit and ornamental plants; a study of vegetables, fruits, nuts, the design of greenhouse structures and landscape plans; seed testing, and storing, grad-

ing and packing of horticultural products. The cold frames and hot beds are of various types for home use and commercial purposes, and are used in vegetable forcing work.

The orchard, vineyard and garden of the Experiment Station offer practice in the pruning and training of various fruits, and also give an opportunity for comparison of the various cultural methods. The grounds, cellar and greenhouses afford ample material for laboratory and classroom work.

### SUBJECTS

- 106 VEGETABLE GARDENING . Spring Quarter. Class 3 hours, laboratory 2 hours. Credit 3 $\frac{2}{3}$ .

This course includes the general principles of vegetable culture, dealing principally with the study of the home and city garden. Some attention is given to vegetable forcing and market gardening. Garden soils and fertilizers as well as various cultural features receive careful attention.

Text: "Productive Vegetable Growing," Lloyd.

Reference: "Vegetable Gardening," Watts.

- 206 FRUIT GROWING. Fall Quarter. Class 3 hours, laboratory 4 hours. Credit 4 $\frac{1}{3}$ .

A course embodying the fundamental principles of fruit production, at the same time furnishing as much practical knowledge of the various phases of tree fruit culture as possible. The theory work embraces water relations, temperature relations, nutrition, propagation, fruit setting, pruning, spraying, climate and frost protection. The practical work includes the making of orchard plans, laying out the orchard, planting, pruning, spraying and the identification of fruits most commonly grown in Oklahoma.

Text: By lectures.

Reference: "Fundamentals of Fruit Production," Gardener, Bradford and Hooker.

- 207 FRUIT GROWING. Fall Quarter. Class 3 hours, laboratory 2 hours. Credit 3 $\frac{2}{3}$ .

An elective offered principally for women. Fruit growing as adapted to the home is specially studied. This course includes a study of the principles and practices of some of the most important lines of horticultural work. Attention is given to the different methods of propagation, planting, cultivating and harvesting of the different varieties of fruit most commonly grown in Oklahoma. The practice work includes the making of orchard plans, laying out the orchard, planting, pruning and spraying. The identification and judging of fruits also receive attention.

Text: "Productive Orchardng," Sears.

Reference: "Fruit Growing in Arid Regions," Paddock and Whipple.

- 310 SYSTEMATIC POMOLOGY. Fall Quarter. Class 3 hours, laboratory 4 hours. Credit 4 $\frac{1}{3}$ .

A study of the origin and history of our cultivated fruits, and of the varieties best adapted to the home and commercial orchards. Trees representing the different species of our leading fruits are carefully observed, and also the influence of environment upon the behavior of the trees and on the development of their products. Practice is given in describing and identifying varieties of fruit and nuts, placing exhibits, and fruit judging.

Text: "Systematic Pomology," Waugh.

- 311 PLANT PROPAGATION. Winter Quarter. Class 3 hours, laboratory 2 hours. Credit 3½.

A study of methods by which plants are propagated by means of division, cuttings, layering, budding and grafting; production and care of seeds, seed testing, bulb reproduction; exercises in the laboratory in propagating garden seeds, flowers, shrubs, forest and fruit trees; nursery practice.

Text: "Plant Propagation," Kains.

Reference: "The Nursery Book," Bailey.

- 312 SMALL FRUITS. Spring Quarter. Class 3 hours, laboratory 2 hours. Credit 3½.

Care and management of the small fruit plantation; a study of varieties and their adaptation to Oklahoma soils and climate. Packing, shipping and marketing also receive some attention.

Text: "Productive Small Fruits," Sears.

Reference: "Bush Fruits," Card.

- 313 FARM FORESTRY. Spring Quarter. Class 3 hours. Credit 3.

A lecture and field course dealing with the general principles of forestry, relation of forestry to agriculture, windbreaks, shelter belts, lumbering, and conservation.

Text: "Elements of Forestry," Moon and Brown.

Reference: "Principles of American Forestry," Green.

- 314 NUT CULTURE. Winter Quarter. Class 2 hours, laboratory 2 hours. Credit 2½.

This course is given to the study of nuts which are of most economic importance. Special attention is given to the native nuts, especially pecans. Practice is given in budding and grafting in the nursery row, as well as in top working native pecans to improve varieties by means of grafting, ring, patch and chip budding. A study also is made of standard varieties of nuts.

Text: "Nut Growing," Morris.

Reference: "The Pecan and Its Culture," Hume.

- 315 SWEET POTATO STORAGE. Fall Quarter. Class 1 hour, laboratory 2 hours. Credit 1½.

A study of the plans and construction of storage houses, curing of seed, propagation of the plants, storage rots, field diseases, and seed certification. Varieties as well as the shipping and marketing of tubers receive attention.

Text: By lectures.

Reference: "The Sweet Potato." Hand & Cockerham.

- 316 VEGETABLE JUDGING. Spring Quarter. Laboratory 4 hours. Credit 1½.

A critical study of varieties in their relation to environment. The use of fertilizers and best methods of preparing the vegetables for market and display purposes. Standard types are given close attention. This course is designed to train men for judging vegetables at the county and state fairs.

Text: By lectures.

- 317 TREE SURGERY. Spring Quarter. Class 1 hour, laboratory 2 hours. Credit 1½.

A study and practice of the proper means of caring for ornamental trees and technical details of planting, pruning and spraying the trees. Bolting and chaining, as well as cavity work are given careful consideration. Shade tree legislation and the duties of shade tree commissions and wardens are discussed.

Text: By lectures.

- 318 FORCING VEGETABLES AND FLOWERS. Winter Quarter. Class 1 hour, laboratory 4 hours. Credit  $2\frac{1}{3}$ .

A study of plant propagation, cultural methods, ventilation, watering and heating. The control of various insect pests and fungus diseases also are given careful attention.

Text: By lectures.

- 319 SPRAYING. Spring Quarter. Class 1 hour, laboratory 2 hours. Credit  $1\frac{1}{2}$ .

Lecture on spraying machinery and principal materials used as insecticides and fungicides. The laboratory work offers exercises in preparing and testing spray materials. Special study is made of the construction of the various types of spray machinery and the nozzles and spray guns are carefully tested.

Text: By lectures.

- 320 CANNING AND HANDLING OF BY-PRODUCTS. Spring Quarter. Class 1 hour, laboratory 2 hours. Credit  $1\frac{1}{2}$ .

A general study of horticultural by-products and fruits and vegetables especially adapted for canning. The different methods of canning, evaporating, drying and the manufacture of vinegar and fruit juices are studied. Buildings, machinery and apparatus necessary for successful work receive considerable attention. Practical work is given in all the fundamental principles connected with the operation of a cannery.

Text: "Successful Canning and Preserving," Ola Powell.

- 412 COMMERCIAL POMOLOGY. Fall Quarter. Class 3 hours, laboratory 2 hours. Credit  $3\frac{1}{2}$ .

A course treating of the care of fruit trees, the management of orchards and the handling of fruit. Problems of pruning, spraying, cultivating and frost prevention are studied; also the approved methods of harvesting, grading, packing, transportation, marketing, storing and construction of cold storage plants. A careful study of the control measures for insect pests and fungus and bacterial diseases are also given considerable attention.

Text: By lectures.

- 413 FLORICULTURE. Fall Quarter. Class 3 hours, laboratory 2 hours. Credit  $3\frac{1}{2}$ .

A course in cultivation and care of greenhouse and home plants, as well as a study of the annuals and perennials adapted to Oklahoma. The proper soils, planting of seed, transplanting, making of cuttings, principles of heating and ventilating, plant disease and insect control receive careful attention. Problems in grouping and arranging of flowers for color harmonies while growing, as well as pleasing effects for decorating purposes, are also included in the course.

Text: "Principles of Floriculture," White.

Reference: "Manual of Gardening," Bailey.

- 414 FORESTRY. Winter Quarter. Class 3 hours, laboratory 2 hours. Credit  $3\frac{1}{2}$ .

A study of the classification and identification of forest trees including forest ecology and taxonomy of the classification of the commercial species, the relative importance of timber species, and the life history and requirements of the trees. The laboratory work consists of a study of planting on college grounds and excursions to near-by wood lots.

Text: By lectures.

- 415 FORESTRY. Fall Quarter. Class 3 hours, laboratory 2 hours. Credit  $3\frac{1}{2}$ .

A study of growing timber for economic purposes. The requirements of

species, their range and the various factors that determine their reproduction and rate of growth are given careful consideration. A careful study of means of protecting from frost fires and insects and the various systems of silviculture are given careful attention.

Text: "Seeding and Planting in the Practice of Forestry," Toumey.

416 PLANT BREEDING. Winter Quarter. Class 3 hours. Credit 3.

A study of the application of principles in breeding to improve our fruits and vegetables; the selection and fixing of varieties; the improvement of plants by selection. Special attention is given to breeding for quality and disease resistance. Practical work given in the orchard, garden and greenhouse in cross-pollination, hybridization and selection.

Text: "Plant Breeding," Bailey.

Reference: "Breeding Crop Plants," Hays and Garber.

417 LANDSCAPE GARDENING. Spring Quarter. Class 3 hours, laboratory 2 hours. Credit 3%.

This course deals primarily with principles underlying landscape art. Considerable time is also given to drafting and solving various problems dealing with landscape art.

Text: "Landscape Gardening," Maynard.

418 PLANT MATERIAL IN LANDSCAPE GARDENING. Winter Quarter. Class 3 hours, laboratory 2 hours. Credit 3%.

A study is made of the form, color, habits and hardiness of various trees and shrubs. The hardy annuals, biennials, and permanent plants are also carefully considered in order to give the student a working knowledge of the materials necessary to formulate a working landscape.

Prerequisite: Hort. 413, 417.

Text: By lectures.

419 GENERAL HORTICULTURE. Spring Quarter. Class 3 hours, laboratory 2 hours. Credit 3%.

This course is offered for teachers, and is designed to meet the needs of school garden work. It includes a study of the principles and practice of some of the most important lines of horticulture work. Considerable time is given to the underlying principles of successful gardening and the adaptation of small areas to the production of vegetables and flowers. The subject of soil preparation, seed selection, fertilizers, hotbeds, planning, planting and care of the garden are given consideration. The fundamental principles of landscape gardening and home decoration are briefly considered. The selection of trees, shrubs and flowers, places to plant them, and artistic arrangement are discussed. Some attention also is given to the different methods of propagating, planting, cultivating and harvesting of the different varieties of fruit most commonly grown in Oklahoma.

Text: By lectures.

420 GREENHOUSE PRACTICE. Fall Quarter. Laboratory 9 hours. Credit 3.

A study of the most important flowers and vegetable crops grown under glass in the fall and winter. Laboratory work consists of practical work in the College greenhouse.

Text: By lectures.

421 GREENHOUSE PRACTICE. Winter Quarter. Laboratory 9 hours. Credit 3.

Continuation of Horticulture 420 with special reference to spring crops.

Text: By lectures.

- 422 COMMERCIAL VEGETABLE GARDENING. Spring Quarter. Laboratory 6 hours. Credit 2.

This course is designed to acquaint the student with the methods of productive harvesting, packing, marketing and storing of the leading commercial vegetables.

Prerequisite: Hort. 106.

Text: By lectures.

- 423 HORTICULTURE PROBLEMS. Fall Quarter. Laboratory 3 hours. Credit 1.

Special subject requiring some independent investigation; results to be presented in a written report.

- 424 HORTICULTURE PROBLEMS. Winter Quarter. Laboratory 3 hours. Credit 1.

A continuation of Hort. 423.

- 425 HORTICULTURE PROBLEMS. Spring Quarter. Laboratory 3 hours. Credit 1.

A continuation of Hort. 423 and 424.

- 426 SEMINAR. Fall Quarter. Class 2 hours. Credit 2.

Open only to students taking the horticultural course. A study of current horticultural literature, including a review of horticultural periodicals, bulletins and U. S. publications.

- 427 SEMINAR. Winter Quarter. Class 2 hours. Credit 2.

A continuation of Hort. 426.

- 428 SEMINAR. Spring Quarter. Class 2 hours. Credit 2.

A continuation of Hort. 426 and 427.

- 429 SUMMER PRACTICE. Credit 2.

Open to junior and senior horticultural students. Two hours credit will be given for satisfactory report made by students who spend the summer on fruit or truck farms or working in a greenhouse. Application for credit must be made by July 1 and a report submitted by October 1.

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## DEPARTMENT OF POULTRY HUSBANDRY

HARRY EMBLETON, *Professor.*

CHARLES W. UPP, *Instructor.*

FLOYD Z. BEANBLOSSOM, *Instructor and Farm Foreman.*

The growing interest in the poultry industry in this State is creating a considerable demand for knowledge along poultry lines, both from the practical standpoint and from the standpoint of the poultry educator. The courses in this department are designed to meet both of these conditions.

The Jackson Poultry Law requires that a majority of the schools in Oklahoma hold a poultry and egg show during the year. This means that the teachers in the State, in order to be qualified to teach their work, should have some poultry knowledge. Our course of instruction takes this condition under consideration and

makes it possible for teachers to get this necessary poultry knowledge.

There is a growing demand on the part of the boys and girls for purebred poultry and for information as to what is purebred poultry. This course is designed to give the teacher this necessary information.

The awakening of poultry interest is countrywide, and is creating a great demand for scientifically trained poultrymen for instructional, investigational and extension work. A student having completed the course in poultry husbandry will be eligible for work of this kind, both with the State and Federal Government.

The Poultry Department is equipped with a large administration building which includes classroom, incubator cellar, egg rooms, etc. This building is located at the plant. The plant consists of thirteen acres of land with breeding and laying houses arranged to get the best results. The houses consist of one long ten-pen laying house and twelve other smaller houses to use for breeding and experimental work. The brooding system consists of one large brooder house of a 2,000-chick capacity, with several smaller houses for smaller flocks. Most of these houses are equipped with colony brooder stoves. The incubation equipment consists of two large incubation cellars containing one 15,000-egg incubator, one of 1,200 eggs capacity and several smaller ones of many different makes.

The stock consists of fifteen different breeds and varieties, which are used for instructional, investigational and breeding purposes. All of the stock is trap-nested, and its records are available for use in the work. The capacity of the plant is 1,000 birds. At the present time the size of the flock is 800 birds.

### *SUBJECTS*

206 FARM POULTRY. Class 3 hours, laboratory 4 hours. Credit 4½.

This course considers the identification and characteristics of the principal breeds and varieties of poultry; the feeding of the farm flock, with a week's feeding practice morning and night at the farm; the comparison of the different types of incubators and brooders, poultry house construction; care of growing stock; breeding for egg-production; poultry diseases; dry picking of poultry; marketing poultry and eggs; caponizing; study of the egg; anatomy; judging poultry and eggs.

This course is outlined for teachers, and persons raising poultry on the farm. It is arranged to give the teachers a good foundation in poultry teaching for the future school work in the State, and to aid the producer to get profitable egg production.

310 POULTRY JUDGING. Class 1 hour, laboratory 6 hours. Credit 3.

The work in this course will consist of practical work in judging fowls

by the standard set forth in the American Standard of Perfection. This is judging them purely from the fancy standpoint. In addition to judging, the question of mating pens and running of poultry shows will be taken up in connection with this work.

311 POULTRY PRACTICE. Laboratory 6 hours. Credit 2.

This course is arranged to acquaint the student with the routine work necessary to carry on a poultry business, so that when the student actually gets in the business he will feel no embarrassment in going right ahead with the work. The work will all be of a practical nature and will be done at the poultry farm.

315 POULTRY PRACTICE. Laboratory 6 hours. Credit 2.

This is similar to 311, with different seasonal work.

317 POULTRY PRACTICE. Laboratory 6 hours. Credit 2.

This is similar to 315, with different seasonal work.

312 INCUBATION AND BROODING. Class 1 hour, laboratory 3 hours. Credit 2.

Each student will be required to select eggs, operate a machine through an entire hatching, keep all records pertaining to the hatch, feed and care for the little chicks after they hatch out for a two weeks' period. This work comes early morning before 8 o'clock, and in the afternoon between 4:30 and 5:30 o'clock. Every student will be required to be at the farm morning and night at these hours, Sunday included, for five consecutive weeks.

313 INCUBATION AND BROODING. Class 1 hour, laboratory 3 hours. Credit 4.

This work is a continuation of 312.

314 POULTRY EXTENSION. Class 2 hours. Credit 2.

In this course will be considered the psychology of poultry extension work. Both work with adults and with boys and girls will be considered. Various types of instruction in order to reach different classes of people will be studied. Chart making will be taken up and gone into thoroughly. Window displays, fair exhibits will be discussed. This course will prepare poultry extension work along many of its branches.

Prerequisite: P. H. 206.

316 POULTRY PROBLEMS. Class 2 hours, laboratory 6 hours. Credit 4.

Each student enrolled in this course will be given a definite, specific piece of experimental work to be worked out on his own responsibility. This will give him a chance to use his initiative, imagination and poultry knowledge obtained from the previous courses. It will also give him an insight into methods of conducting experimental work.

Prerequisite: P. H. 205.

414 POULTRY PROBLEMS. Class 2 hours, laboratory 6 hours. Credit 4.

Similar to 316, with different problems involved.

415 POULTRY PROBLEMS. Class 2 hours, laboratory 6 hours. Credit 4.

Similar to 414, with different problems involved.

416 POULTRY PROBLEMS. Class 2 hours, laboratory 6 hours. Credit 4.

Similar to 415, with different problems involved.

412 ADVANCED POULTRY JUDGING. Laboratory 6 hours. Credit 2.

This follows the junior course in judging and will be of a more advanced nature. This course will be used to develop the poultry judging teams.

Prerequisite: P. H. 310.

413 ADVANCED POULTRY JUDGING. Laboratory 6 hours. Credit 2.  
This course is a continuation of 412.

417 POULTRY BREEDING. Class 3 hours. Credit 3.

The importance of breeding in connection with egg production is now being fully realized. A thorough knowledge of this phase of the work is necessary for success in poultry work. This important subject will be gone into thoroughly. Accumulated records of the last few years will be studied to substantiate some of the known truths, and to throw further light on some questions still remaining to be solved.

Prerequisite: P. H. 206.

418 POULTRY MANAGEMENT. Class 2 hours. Credit 2.

This course embraces the business end of the poultry flock. Figuring of incubation capacities, brooding capacities, winter laying house capacities, day-old chick and hatching egg question, possible profits from a definite size poultry flock, the choosing of poultry farms as to their topography, location, climatic conditions, etc., to be considered. The scoring of poultry farms from the standpoint of poultry farm efficiency will be considered.

Prerequisite: P. H. 206.

419 POULTRY MANAGEMENT. Class 2 hours. Credit 2.

This course is a continuation of 418.

420 GENERAL POULTRY. Class 3 hours, laboratory 4 hours. Credit 4½.

This course is planned to give a general survey of the whole field of poultry in a concise way. Questions such as feeding for egg production, breeding for egg production, culling, housing, incubation and brooding, diseases, marketing, judging fowls for production, etc., will be discussed. The course is planned to fill the need of a hasty survey of poultry such as one preparing for Smith-Hughes work, county agent work, etc., would need when time did not permit of going into the subject more thoroughly.

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## DEPARTMENT OF RURAL ENGINEERING

LESLIE E. HAZEN, *Professor.*

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This department concerns itself with those branches of engineering science most applicable to the needs of farming communities. The scope of its work is limited to those phases of engineering which are of direct importance because utilized in practice by farmers themselves. Two distinct lines of teaching are undertaken, the first being elementary courses for students specializing in other lines of agricultural activity, the second being basic courses for those desiring to train themselves for positions as agricultural engineers, vocational teachers, farm machine experts, county agents, farm managers, and general farmers. We are living in a time when a farmer's success as a producer is measured quite largely by his skill in engineering practice.

**SUBJECTS**

- 106 **FARM MECHANICS.** Class 2 hours, laboratory 2 hours, and report Credit 2 $\frac{3}{4}$ .

This course is for the purpose of introducing the student to the study of those mechanical processes and features of design incident to the selection and operation of horsedrawn farm machinery.

The laboratory course is arranged to give practice in rope work, terracing, leveling, and machine sketching.

Text: "Physics of Agriculture," King.

- 107 **RURAL ENGINEERING ELEMENTS.** Nine hours per week. Credit 3

A course introducing the student to methods used in engineering practice. It consists of freehand sketching, mechanical drafting, and field work with farm levels. May be taken in lieu of 106 by freshmen in agriculture. Required of freshmen in rural engineering. No text; mimeographs furnished by department. Student purchases notebook, drawing supplies, and graph paper.

- 206 **SPRAY MACHINERY.** Class 1 hour, laboratory 2 hours, and report Credit 2.

A study of pumps, pressure regulators, spray nozzles, tanks, pressure gauges and agitators for students in horticulture. Practice in the usual procedures for adjustment and maintenance of such machinery is given.

Elective for agricultural students.

- 207 **TILLAGE IMPLEMENTS.** Drafting room and field work 3 hours per week. Credit 1.

A study of plow design on a physical basis with dynamometer tests of plows, harrows, packers, and cultivators under field conditions. Required of students in agricultural engineering.

Prerequisite: Trigonometry and Engineering Physics.

- 208 **HARVESTERS.** Class 1 hour, drafting room and field work 3 hours per week. Credit 2.

A study of the mechanisms found in modern harvesting machinery with special attention to cams, linkages, and gear trains. Detail sketches of knowing devices are made from the machine and their synchronism studied. Required of students in agricultural engineering.

Prerequisite: Kinematics and Tillage Implements.

- 310 **FARM MOTORS.** Class 3 hours, laboratory 4 hours. Credit 4 $\frac{1}{3}$ .

A study of the working principles and operation of gas and oil engines. Special emphasis is given to trucks and tractors.

Prerequisite: R. E. 101.

- 311 **FARM STRUCTURES.** Class 1 hour, laboratory 6 hours. Credit 3.

One lecture and two drafting periods per week in which the economical design of farm buildings is considered.

- 312 **FARM SURVEYING.** Class 1 hour, laboratory 6 hours. Credit 3.

The scope of the work in this course includes the common process necessary in laying out terraces, tile drains and irrigation ditches, and computation of land areas.

- 313 **AUTOMOTIVES.** Field and shop work 3 hours per week. Credit 1.

Practice in the proper manipulation and adjustment of tractors, truck and passenger cars under service conditions. Each student must actually lay out one plat of ground, plow and fit it with a tractor plow and fitting rig making his own adjustments and minor repairs. Open only to students in agricultural engineering.

314 DOMESTIC ENGINEERING. Class 1 hour, laboratory or drafting room 6 hours per week. Credit 3.

A study of water systems, electric lighting plants, sewage disposal, and farm refrigeration plants, heating and ventilation of residences, and general precautions to be taken in sanitation design.

Prerequisite: Engineering Physics.

Required of agricultural engineering students.

414 RURAL ENGINEERING PROBLEMS. 3 lectures, 4 hours laboratory per week. Credit 4⅓.

This course is designed to meet the needs of students in general agriculture who do not have the time for the more specialized courses in domestic machinery, land reclamation, and rural architecture, yet desire some working knowledge in each field.

Prerequisite: Farm Mechanics 106; Agronomy 207 and Farm Motors 310.

415 RURAL ARCHITECTURE. Drafting room 6 hours per week. Credit 2.

A course in freehand sketching to scale of residence and barn plans most applicable to a given set of conditions, and the drawing of a full set of plans for a farm residence. This course is a continuation of the work commenced in domestic engineering and is open only to students having a ready knowledge of drafting and some knowledge of structural design. Required of agricultural engineering students.

416 PUBLIC ROADS. Two class hours per week. Credit 2.

A study of the methods most applicable in improving highways where high first cost is not feasible. The discussions include hard surfacing materials.

Required of agricultural engineering students.

417 LAND RECLAMATION. Two class hours per week. Credit 2.

Irrigation and reclamation projects as carried on by state and commercial concerns. Required of agricultural engineering students.

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## RURAL ECONOMICS AND SOCIOLOGY

....., *Professor.*  
JOSEPH D. STAFFORD, *Assistant Professor.*

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The courses in Rural Economics and Sociology are offered to supplement the production courses in the School of Agriculture, and are intended to round out the other courses by giving the student a knowledge of the economic principles which relate to the production and marketing of farm products; and they are furthermore intended to stimulate interest in the socio-economic conditions of the agricultural classes.

Students who wish to major in the department of Rural Economics and Sociology are advised to select certain courses if they plan to prepare for positions as teachers; if they have in mind to prepare themselves for practical work as farm managers, certain other courses will be found most helpful. Many of the courses are suitable as minors for students in other schools or departments.

**SUBJECTS**

101 GENERAL AGRICULTURAL ECONOMICS. Class 4 hours. Credit 4  
Elementary and Basic course in Agricultural Economics with practical application to farm problems.

Required of all Agricultural students.

301 PRINCIPLES OF AGRICULTURAL ECONOMICS. Class 3 hours. Credit 3.

The outlines of economics and their application to production and marketing of farm products.

302 MARKETING AGRICULTURAL PRODUCTS. Class 3 hours. Credit 3  
Analysis of market functions, marketing channels, and marketing agencies

308 FARM ORGANIZATION. Class 2 hours, laboratory 4 hours. Credit 3½

Farm methods as applied to business management on the farm. Visits to farm are made the basis of laboratory work.

Required of all agricultural students.

309 FARM RECORDS AND ACCOUNTS. Class 1 hour, laboratory 4 hours. Credit 2½.

Inventories, bookkeeping and accounting as applied to farm operations.

305 RURAL SOCIOLOGY. Class 3 hours. Credit 3.

To be a course devoted to the social environment within which the farmer lives and finds satisfaction or dissatisfaction as a consumer and desirable community builder.

306 AGRICULTURAL STATISTICS. Class 2 hours. Credit 2.

Statistical method applied to agricultural data.

307 LAND ECONOMICS. Class 3 hours. Credit 3.

Land classification; land as a factor of production; the economic status of the agricultural classes with special reference to the relations of landlord and tenant.

408 COST ACCOUNTING. Class 1 hour, laboratory 4 hours. Credit 2½.

Systems of cost accounting in their application to the problems of farm organization and operation.

409 ADVANCED FARM MANAGEMENT. Class 3 hours, laboratory 4 hours. Credit 4½.

An advanced seminar course including cost production studies, farm business analyses, and farm practices.

410 EFFICIENT MARKETING FOR AGRICULTURE. Class 3 hours. Credit 3.

To be a basic course for subsequent work with courses 301 and 302 (above) as prerequisites. Farmers' organizations with special reference to cooperative marketing.

411 RURAL LIFE. Class 3 hours. Credit 3.

The country life movement and social problems of farm and village.

412 FARMER MOVEMENTS. Class 3 hours. Credit 3.

A discussion of the great farmer movements such as the Grange, the Union, and the American Farm Bureau Federation.

413 FARM FINANCE. Class 3 hours. Credit 3.

Systems of farm credit in use in different countries; the financial needs of typical farmers; present facilities for supplying them; the financing of the various farm organizations; the farmer as an investor.

414 ECONOMIC GEOGRAPHY AND HISTORY OF AGRICULTURE. Class 3 hours. Credit 3.

Localization of agricultural products; markets and systems of farming, and economic and other forces determining this localization, considered in relation to industries in general. The evolution of modern methods of agricultural production and marketing, types of farming and tenure systems.

415 EXTENSION WORK. Class 3 hours. Credit 3.

The history of the extension service; modern methods employed especially as applied to the work of Oklahoma. To be offered to seniors in the third quarter where five or more make application for it. Federal, state, and local extension aims and organizations. Place of boys' and girls' club work in rural education; methods of organization, leadership, meetings, demonstrations, exhibits, and reports.

*GENERAL AGRICULTURE*

402 COLLEGE AND EXPERIMENT STATION WORK, ORGANIZATION AND FUNCTION. Class 1 hour. Credit 1.

This course is intended to familiarize the Senior students with the history and organization of the American Land Grant Colleges, including the Agricultural Experiment Stations and the Extension Divisions. A study is made of the strong and weak points of the institutions as compared with other institutions of higher education in the United States from the standpoint of both the undergraduate and graduate student. The amount of Federal and State aid given these institutions and its distribution into educational, research and extension lines is discussed. The further object is to familiarize the student with the lines of work being undertaken in the various Experiment Stations, and the special features that are made prominent in the various states. The course is designed to prepare students for entrance into College and Station work where such is desired, and to give those who are going into the more practical application of their calling upon the farm an opportunity to become familiar with the different institutions and the best means of utilizing the information available.

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DEPARTMENT OF AGRICULTURAL EDUCATION

O. M. CLARK, *Professor.*

M. G. HARNDEN, *Assistant Professor.*

W. B. GOE, *Assistant Professor, In Charge of Observation and Practice School.*

The naation-wide interest and activities in an education which effectively prepares the boys and girls of the land for high standards of citizenship and for efficient service in the life work they are to follow as men and women, together with the institution of the Smith-Hughes act for promoting and subsidizing vocational education, have created an increased demand for well-trained teachers of vocational subjects of all kinds. In Oklahoma and other states where agriculture is the paramount industry the demand for properly prepared teachers of vocational agriculture is especially great.

The function of the Department of Agricultural Education is to give the professional training for prospective teachers of vocational agriculture in schools of secondary grade. The work offered meets the provisions of the Federal act, and is under the supervision of the State Board for Vocational Education.

The work of this department is confined largely to instruction in methods of teaching agriculture, practice teaching, and study of plans of organization of departments of vocational agriculture in secondary schools while the subject matter proper in agriculture is under the supervision of and given by the several subject matter departments.

There has been a demand from graduates of normal schools for a well-rounded course in agriculture which would better fit their needs and which they might complete in shorter time than required for completion of the regular four-year specialized courses. The work of this department is so organized that graduates of normal schools can complete the course and get a degree in agricultural education in two years.

For description of four-year course of study, see table of four-year courses preceding.

### SUBJECTS

424 AGRICULTURAL EDUCATION. Fall Quarter. Class 4 hours, laboratory 6 hours. Credit 6.

Organization and development of agricultural education, with special reference to teaching agriculture in schools below college rank; the projected phases of teaching; selection, organization and presentation of subject matter adapted to use in secondary schools; plant and equipment of department of vocational agriculture.

Students will be required to take at least two trips to departments of vocational agriculture in schools of the state other than the school for observation and practice teaching.

425 AGRICULTURAL EDUCATION-PRACTICE TEACHING. Fall Quarter. Class 1 hour, practice 3 hours. Credit 2.

Development of lesson plans and methods of teaching; observation and supervised practice teaching in a department of agriculture in a high school located near the College.

Prerequisite: Edu. 322 and taken concurrently or after agricultural education 424.

426 AGRICULTURAL EDUCATION-PRACTICE TEACHING. Winter Quarter. Class 1 hour, practice 3 hours. Credit 2.

This course is a continuation of Agricultural Education 425.

In pursuance of the two courses in practice teaching (Agri. Edu. 425 and 426) each pupil will be required in addition to other work to spend at least 15 half days in observation and practice teaching in a school located near the College.

The two courses in practice teaching are required of all students preparing to become teachers of vocational agriculture in secondary schools.

GENERAL AGRICULTURE

- 106 PLANT PRODUCTION AND METHODS. Class 3 hours, laboratory 4 hours. Credit 5.

This is a general course in plant production dealing with the subjects in a way as to best suit the needs of those pupils who will teach or be responsible for the teaching of general agriculture in the public schools of the State. The object is to familiarize the prospective teachers with simple, but fundamental, principles of plant growth, soils, fertilizers, the production of field, orchard and garden crops, injurious insects, plant diseases and the economic relationships of farm enterprises.

- 107 ANIMAL PRODUCTION AND METHODS. Class 3 hours, laboratory 4 hours. Credit 5.

This course deals with animal production in about the same way as 106 deals with plant production, special emphasis being given to the principles of poultry, cattle and hog production, home dairying and the relationship between livestock and successful farming.

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DIVISION OF VOCATIONAL AGRICULTURE

(Non-Collegiate)

O. M. CLARK, *Professor.*

GLEN BRIGGS, *Principal.*

E. L. McBRIDE, *Federal Coordinator.*

FRED J. BEARD, *Instructor in Animal Husbandry.*

..... *Instructor in Agronomy and Rural Economics.*

E. R. LAWRENCE, *Instructor in Dairying.*

CHARLES W. UPP, *Instructor in Poultry.*

The following vocational courses are offered by the School of Agriculture:

1. Secondary Vocational Agriculture, two years.
2. Vocational Agriculture for Federal Trainees.

These courses are planned for students who have completed the eighth grade of the common schools and are designed to fit the vocational student upon the completion of the course for diversified farming and the Federal trainee for specialized farming as may be satisfactorily practiced under Oklahoma conditions. Enough of the vocational subjects such as livestock, crops, soils, poultry, dairying, etc., is included to give the student reasonable proficiency.

Specialists will handle the classes in every case and similar opportunities for the use of laboratories, greenhouse, livestock and farms will be given to students in this course as in the regular college course. The work consists of two years of study of three quarters each, and extra courses are offered in the summer for federal trainees. The courses are intensely practical and will be valuable to all students who contemplate going back to the farm or continue their education by taking more advanced work.

## Oklahoma A. and M. College

## SECONDARY VOCATIONAL AGRICULTURE

(Two Years)

## FIRST YEAR

FALL QUARTER				WINTER QUARTER			
	Th.	Lab.	H. S. Units		Th.	Lab.	H. S. Units
Eng. Ia	5		.334	Eng. Ib	5		.333
*Military		(3)	.100	Agron. (Forage) Ib	3	(4)	.333
Agron. (cereals) Ia	3	(4)	.333	A. H. Ib	4		.267
P. H. Ia	3	(4)	.333	Forage IIb		(4)	.133
Phys. Ed.		(3)	.100	Phys. Ed.		(3)	.100
Dairying Ia	3	(4)	.333	*Military		(8)	.100
20 hrs. 1.533				21 hrs. 1.599			

## SPRING QUARTER

	Th.	Lab.	H. S. Units
Eng. Ic	5		.333
Ento. Ic	3	(2)	.267
Veg. Gar. Ic	3	(4)	.333
Arith. Ib	4		.267
Woodwork IIc		(4)	.133
Phys. Ed.		(3)	.100
*Military		(3)	.100

20 hrs. 1.533

## SECOND YEAR

FALL QUARTER				WINTER QUARTER			
	Th.	Lab.	H. S. Units		Th.	Lab.	H. S. Units
Eng. IIa	5		.334	Eng. IIb	5		.333
Gen. Sci. IIa	3	(4)	.333	Gen. Sci. Ib	3	(4)	.333
Fruit Gr. Ia	3	(4)	.333	Farm Act. IIb	3	(4)	.333
A. H. Prod. IIa	3	(2)	.267	Farm Str. IIb		(4)	.133
Seeds and Weeds IIa	1	(2)	.133	A. H. IIb	3	(4)	.333
21 hrs. 1.400				22 hrs. 1.465			

## SPRING QUARTER

	Th.	Lab.	H. S. Units
Eng. IIc	5		.333
Gen. Sci. Ic	3	(4)	.333
Farm Mch. IIc	3	(2)	.267
Agron. (soils) IIc	3	(4)	.333
Agri. Mktg. IIc	3		.200

22 hrs. 1.466

\*Military work is optional with Vocational Agricultural students.

## VOCATIONAL AGRICULTURE FOR FEDERAL TRAINEES

## AGRONOMY

FALL QUARTER				WINTER QUARTER			
Soils IIc	3	(4)		Cereal and Fiber Crops Ia	3	(4)	
Forage Crops Ib	3	(4)		Forage Crops Ib	3	(4)	

## SPRING QUARTER

Soils IIc	3	(4)
Cereal and Fiber Crops Ia	3	(4)

## CORRELATED SUBJECTS:

Animal Husbandry Ib  
Dairy Ia  
Farm Machinery IIc  
Poultry IIa  
Farm Management and Farm Accounts Ib  
Marketing IIc  
Entomology Ic

## SUMMER:

Cereal and Fiber Crops Ia 6 (8)  
Forage Crops Ib 6 (8)

## ANIMAL HUSBANDRY

FALL QUARTER				WINTER QUARTER			
L. S. IIb	4	(4)		L. S. IIb	3	(2)	
L. S. Id	3	(2)		L. S. Id	3	(2)	
L. S. Ic	2	(2)		Cattle Mgt. IIc	1	(4)	
Swine Mgt. IId	1	(4)					

SPRING QUARTER	
L. S. IIb .....	3 (4)
L. S. Id .....	3 (4)
L. S. Ic .....	1 (2)
Horse and Sheep Mgt. IIc .....	1 (4)

CORRELATED SUBJECTS:

SUMMER:

Animal Diseases Ia	L. S. IIb
Forage Crops Ib	L. S. Id
Cereal Crops Ia	
Farm Mgt. and Accts. IIb	
Dairy Ib	
Poultry Ia, or IIa	
Veg. Gardening Ic	
R. Econ. 305, Rural Sociology	
Farm Machinery Ic	
Farm Structures IIb	

DAIRY

FALL QUARTER		WINTER QUARTER	
Dairy Ib .....	3 (4)	Dairy Ia .....	3 (4)
Dairy IIb .....	3 (2)	Dairy Ib .....	3 (4)
		Dairy IIb .....	4 (2)
SPRING QUARTER			
Dairy Ib .....	3 (4)		
Dairy IIa .....	3 (4)		

CORRELATED SUBJECTS:

SUMMER:

Animal Diseases Ia	Dairy Ib .....	6 (8)
Forage Crops Ib	Dairy IIa .....	6 (8)

ENTOMOLOGY

FALL QUARTER		WINTER QUARTER	
Entomology Ic .....	3 (2)	Entomology Ic .....	3 (2)
SPRING QUARTER			
Ento. 310, Beekeeping .....	3 (2)		

HORTICULTURE

FALL QUARTER		WINTER QUARTER	
Fruit Growing IIa .....	3 (4)		
SPRING QUARTER			
Veg. Gar. Ic .....	3 (2)		
Small Fruits IIc .....	3 (2)		

CORRELATED SUBJECTS:

Hort. 417, Landscape Gardening	3 (2)
Hort. 313, Forestry	3

POULTRY

FALL QUARTER		WINTER QUARTER	
Farm Poultry IIa .....	3 (4)	Incubation and Brooding IIc .....	1 (6)
Poultry Problems IIb .....	2 (6)	Poultry Management IIc .....	2 (6)
SPRING QUARTER			
Poultry Problems IIb .....	2 (6)		
Poultry Management IIc .....	2		
Incubation and Brooding IIc .....	1 (6)		
Farm Poultry IIa .....	3 (4)		
Poultry Judging IIb .....	1 (6)		

CORRELATED SUBJECTS:

SUMMER:

Agri. Marketing IIc	Farm Poultry IIa .....	6 (8)
R. Econ. 411, Rural Life	Poultry Practice IIb .....	(18)
Zool. 213	Poultry Problems IIb .....	4 (12)
R. Econ. 305, Rural Sociology		
Agron. Ia, Com. Grades of Grain		
Zool. 408, Embryology		
Hort. 417, Landscape Gardening		

RURAL ECONOMICS

FALL QUARTER		WINTER QUARTER	
Farm Management and Accts. IIb	3 (4)	Agricultural Marketing IIc .....	3
SPRING QUARTER			
Farm Management and Accts. IIb	3 (4)		

RURAL ENGINEERING

FALL QUARTER		WINTER QUARTER	
IIb, Farm Structures .....	(4)	IIc Farm Mechanics .....	2 (2)

SPRING QUARTER  
 IIc Farm Mechanics ..... 2 (2)

## CORRELATED SUBJECTS:

- Ia. Cereal Crops  
 Ib. Forage Crops

## VETERINARY

FALL QUARTER		WINTER QUARTER	
Ia. An. Diseases	22 ..... 3 (2)	Ia Animal Diseases	..... 3 (2)
SPRING QUARTER			
Ia An. Diseases	..... 3 (2)		

## CORRELATED SUBJECTS:

Vet. Sci. 316, Animal Physiology

## SUBJECTS

## AGRONOMY

Ia CEREAL AND FIBER CROPS. Class 3 hours. laboratory 4 hours.

Practical lessons will be given in harvesting, storing, seedbed preparation, planting and cultivating the leading cereal and fiber crops of Oklahoma. Much time will be given to grain judging, commercial grades of grain, cotton judging, seed selection, seed testing and treatment for smut.

Text: "Productive Farm Crops," Montgomery.

Ib FORAGE CROPS. Class 3 hours, laboratory 4 hours.

Practical lessons will be given in seedbed preparation, planting, cultivating, harvesting and storing the leading forage crops of Oklahoma. Laboratory work will consist of field observations, seed selection, weeds, and seed testing.

Text: "Productive Farm Crops," Montgomery.

IIc SOILS. Class 3 hours. laboratory 2 hours.

Attention will be paid to the fundamental principles underlying soil management; study will be made of how plants feed and grow; properties of the soil: plant food in soil; conservation of soil fertility; crop rotation; barnyard manure; humus; fall plowing and testing soil for acidity.

Text: "Soils and Soil Fertility." Whitson and Walster.

IIa SEEDS AND WEEDS. Class 1 hour. laboratory 2 hours.

A study of the most important farm seeds in Oklahoma, means of identifying pure seed, selection of planting seed, Oklahoma Seed Law, and a study of weeds with reference to methods of introduction, methods of combating them, as well as a study of their seeds so that it will be possible to recognize them when occurring in farm seeds.

Text: Agricultural bulletins.

## ANIMAL HUSBANDRY

Ib LIVESTOCK. Class 3 hours. laboratory 4 hours.

This course is intended to give the student an insight into the business of judging animals and by actual practice to acquaint him with the good. Some time will be given to market types, and a short study will be made of the production of correct types of animals.

Text: "Livestock Judging and Selection," Curtis.

Id LIVESTOCK FEEDING. Class 3 hours. laboratory 2 hours.

An elementary course in livestock feeding involving the most important general principles governing rational and economical feeding. The student studies the important feeding stuffs used in this country, giving particular attention to feeds of local importance.

Laboratory deals with judging and selection of livestock, emphasizing points of the various classes of livestock. The course is somewhat general.

different phases of production. The aim is to create a desire for better grades of livestock and more proficient judges.

Prerequisite: Livestock IIb.

Text: "Feeds and Feeding," Abridged.—Henry & Morrison.

**Ic LIVESTOCK FEEDING.** Class 2 hours, laboratory 2 hours.

Continuation of Id and taking up the practical feeding, care and management of each class with special practical application to local conditions. This course includes selection of feeds for different purposes and the calculation of rations. The appendix tables show the composition and digestible nutrients of the important feeds.

Laboratory: Same as in Id.

Prerequisite: Livestock Id and IIb.

Text: "Feeds and Feeding," Abridged.—Henry & Morrison.

**IIa ANIMAL HUSBANDRY PRODUCTION.** Class 3 hours, laboratory 2 hours.

This course is given to meet the demands of two-year vocational agricultural students and consists of a study of practical problems arising in production of livestock and care of animals. Practical laboratory work will consist of feeding and caring for animals at the barns.

**IIb BREED TYPES AND JUDGING OF ANIMALS.** Class 4 hours, laboratory 4 hours.

This course gives the student a training in breed types of animals. The student studies the history of our important breeds of animals, and with the good livestock of the Animal Husbandry Department before him he gets acquainted with the types and characteristics of the more important breeds.

Text: "Animal Husbandry for Beginners," Plumb.

**IIc HORSE AND SHEEP MANAGEMENT.** Class 1 hour, laboratory 4 hours.

A study of care and management and methods in growing and marketing horses. Laboratory includes fitting and adjusting harness, care of feet, decorating. Administering first aid treatment and bandaging. Sheep management includes growing, fitting and finishing sheep for market; practice in shearing sheep, feeding and caring for ewes and lambs.

**IId SWINE MANAGEMENT.** Class 1 hour, laboratory 4 hours.

Practical problems arising in swine production as housing and caring for breeding herd; shipping and marketing. Laboratory includes mixing of feeds, feeding, making crates, vaccinating, breeding, preparing for show and caring for sow at farrowing time.

Prerequisite: L. S. 31 and L. S. 32.

**IIe CATTLE MANAGEMENT.** Class 1 hour, laboratory 4 hours.

Study in production and marketing, care and management of breeding herd. Laboratory includes practical work at cattle barn in feeding and care of breeding herd, including tattooing, vaccination and castrating, also fitting for show.

Prerequisite: L. S. 31 and L. S. 32.

**DAIRY**

**Ia ELEMENTARY DAIRYING.** Class 3 hours, laboratory 4 hours.

An elementary course in dairying, including the testing of milk and cream by the Babcock test, the operation of cream separators and farm churning of butter, cottage cheese and ice cream making; a study of dairy cows, their feeding and management, and the production and handling of market milk.

Text: "Dairy Farming," Michels.

**Ib JUDGING AND PRODUCTION.** Class 3 hours, laboratory 4 hours.

This course is intended for students who wish to make Dairy Husbandry their vocation. Special attention will be given to judging dairy cattle for production, selecting, buying, testing, keeping records of production and principles of dairy management.

**IIa DAIRY CATTLE FEEDING AND CARE.** Class 3 hours, laboratory 4 hours.

The feeding of dairy cattle, calculations of rations. Practice work at dairy barn, selection and mixing of feeds, the raising and care of calves, the development of the dairy herd.

Text: "Dairy Cattle Feeding and Management," Larsen and Putney.

**IIb DAIRY CATTLE BREEDING AND MANAGEMENT.** Class 3 hours, laboratory 2 hours.

Principles of breeding, selection of sires and herd development. Milk production and care of milk. Common ailments of dairy cattle. Feeding for advanced registry production and record keeping. Picking dairy animals for show purposes.

Text: "Dairy Cattle Feeding and Management," Larsen and Putney.

**ENTOMOLOGY****Ic GENERAL ELEMENTARY ENTOMOLOGY.** Class 3 hours, laboratory 2 hours.

Instruction will be given in lectures, consequently no textbooks will be required. The habits of injurious and beneficial insects will be explained. Methods for controlling the injurious forms will be tested in practice as far as convenience will permit. Methods for developing beneficial forms will be taught. Primary practice in beekeeping will be given.

**310 BEEKEEPING.** Class 4 hours, laboratory 2 hours.

A general course in beekeeping. A hive and colony of bees will be required of each student.

Text: By assignment.

**HORTICULTURE****Ic HOME VEGETABLE GARDENING.** Class 3 hours, laboratory 2 hours.

This course includes the general principles of vegetable culture and study of the home garden.

Text: "Vegetable Growing," Boyle.

**IIa HOME FRUIT GROWING.** Class 3 hours, laboratory 4 hours.

A course dealing with the general principles of fruit-growing, including a study of culture requirements, propagation, and the relative importance of the different fruits for home use.

Text: "Farm Horticulture," Hood.

**IIc SMALL FRUITS.** Class 3 hours, laboratory 2 hours.

Care and management of a small fruit plantation. A study of varieties with special reference to their adaptation to Oklahoma.

Text: "Productive Small Fruits," Sears.

**POULTRY****Ia GENERAL ELEMENTARY POULTRY.** Class 3 hours, laboratory 4 hours.

The work in this course will cover all phases of poultry work necessary for practical poultry raisers, either on the farm or in town. A study of breeds and types will be made from the utility standpoint. Feeding, incuba-

tion and brooding, housing, poultry diseases, marketing of poultry and eggs, caponizing, picking and killing, and study of the egg will be considered. Special stress will be put upon factors which deal primarily with egg production.

**IIa FARM POULTRY.** Class 3 hours, laboratory 4 hours.

This course considers the identification and characteristics of the principal breeds and varieties of poultry; the feeding of the farm flock, with a week's feeding practice morning and night at the farm; the comparison of the different types of incubators and brooders; poultry house construction; care of growing stock; breeding for egg production; poultry diseases; dry picking of poultry; marketing poultry and eggs; caponizing; study of the egg; anatomy; judging poultry and eggs. This course is outlined for teachers, and persons raising poultry on the farm. It is arranged to give the teachers a good foundation in poultry teaching for the future school work in the State and to aid the producer to get profitable egg production.

No prerequisite.

**IIb POULTRY PRACTICE.** Laboratory 9 hours.

This course gives the student actual practice in handling and caring for poultry, buildings, grounds, sanitation, and deals with conditions as they exist.

**IIc INCUBATION AND BROODING.** Class 1 hour, laboratory 6 hours.

Each student will be required to select eggs, operate a machine through an entire hatching, keep all records pertaining to the hatch, feed and care for the little chicks after they hatch out for a two weeks period. This work comes early in the morning before 8 o'clock, and in the afternoon between 4:30 and 5:30 o'clock. Every student will be required to be at the farm morning and night at these hours, Sunday included for five consecutive weeks.

No prerequisite.

**IId POULTRY JUDGING.** Class 1 hour, laboratory 6 hours.

The work in this course will consist of practical work in judging fowls by the standard set forth in the American Standard of Perfection. This is judging them purely from the fancy standpoint. In addition to judging, the question of mating pens and running of poultry shows will be taken up in connection with this work.

No prerequisite.

**IIe POULTRY MANAGEMENT.** Class 2 hours.

This course embraces the business end of the poultry flock. Figuring of incubation capacities, brooding capacities, winter laying house capacities, day-old chick and hatching egg question, possible profits from a definite size poultry flock, the choosing of poultry farms as to their topography location, climatic conditions, etc., to be considered. The scoring of poultry farms from the standpoint of farm efficiency will be considered.

Prerequisite: P. H. IIa.

**IIf POULTRY PROBLEMS.** Class 2 hours, laboratory 6 hours.

Each student enrolled in this course will be given a definite, special piece of experimental work to be worked out on his own responsibility. This will give him a chance to use his initiative, imagination and poultry knowledge obtained from the previous courses. It also will give him an insight into methods of conducting experimental work.

Prerequisite: P. H. IIa, IIe.

**RURAL ECONOMICS**

**IIb FARM MANAGEMENT AND ACCOUNTS.** Class 3 hours, laboratory 4 hours.

Study is made of the points to be considered in the selection of the farm,

types of farming, planning and arrangement of the farmstead, the fields and crop rotation. Special emphasis is laid on the principles underlying successful management of the farm business in order to receive the greatest continuous profit from the farm. Simplified methods of keeping farm accounts and records will be given, including stock and crop accounts, expenses and receipts, which will enable the farmer to determine his income.

Text: "Wisconsin Farm Account Book," and "Farm Management," Boss.

#### IIc AGRICULTURAL MARKETING. Class 3 hours.

Takes up the marketing of farm products with a study of cooperative plans, supply and demand, and successful farm advertising.

### RURAL ENGINEERING

#### IIb FARM STRUCTURES. Shop practice 4 hours.

Studies of various types of buildings for farm use—dwellings, barns, hog houses, chicken houses, silos, etc. Drawings examined on types studied, and structural details mastered. Models examined on College farm.

#### IIc FARM MECHANICS. Class 2 hours, laboratory 2 hours.

This course consists of an elementary study of the construction of and best methods of operating the various farm implements used in seedbed preparation, cultivation, seeding, and harvesting.

Text: "Physics of Agriculture," King.

### VETERINARY

#### Ia ANIMAL DISEASES. Class 3 hours, laboratory 2 hours.

The object of this course will be to acquaint the student with the more common diseases of livestock. Prevention of disease and care of stock will receive more attention than treatment. Frequent clinics will be held to familiarize students with locations of various troubles. Students will be given opportunity to know the current methods of vaccinating hogs, cattle, and other animals.

Text: "Diseases of Farm Animals," Craig.

### FARM SHOPS

#### Ic WOODWORK. Practice 4 hours.

The object of the course is to develop skill that can be applied to the farm.

#### Ib FORGE. Practice 4 hours.

This course includes heating, shaping, and welding, tempering and hardening of steel, pipe-fitting and drill press work.

### MISCELLANEOUS

#### Ia and Ib ARITHMETIC. Class 4 hours.

This course gives an intensive drill in common operations and involves principles rather than short-cut calculations. The student's language and mental method are looked after.

#### Ia, Ib, Ic VOCATIONAL ENGLISH. Class 5 hours.

A study is made of composition and grammar. Themes on subjects of agricultural interest are written for individual correction and revision. Two or three classics are read each semester.

#### IIa, IIb, IIc VOCATIONAL ENGLISH. Class 5 hours.

This course includes composition, theory and practice. Three or more classics are read each semester.

1a, 1b, 1c GENERAL SCIENCE. Class 3 hours, laboratory 4 hours.

Elementary physics, chemistry, and biology are studied in such a way as to aid the student in his mastery of agricultural problems. The subject is approached from the vocational point of view.

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## FARMERS' SHORT COURSES IN PRACTICAL AGRICULTURE

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It is the purpose of the School of Agriculture to lay more stress on the farmers' short courses without in any way neglecting the degree courses. These courses are designed to meet the needs of the busy farmer who cannot get away from his work long at a time and who wants to secure information on some of his farm problems. In this way the farmers have an opportunity to get the benefit of the advantages that are given at the A. and M. College through our equipment and excellent corps of instructors. While they are here they are given an opportunity to study the farm, livestock, field experiments, poultry plant, horticultural experiments and the various departments of instruction, getting first-hand information.

There are no examinations to be passed for admission to these courses. The prospective student should be at least sixteen years old. If interested, send to the Dean of Agriculture, A. and M. College, Stillwater, Oklahoma, for detailed information and special circular on short courses.

The following is a list of short courses in agriculture which are distributed through the year at times most convenient for the busy farmers and farmers' sons to attend:

1. Twelve Weeks General Short Course.
2. Six Weeks Dairy Course.
3. One Week Ice Cream Makers' Course.
4. One Week Creameryman's Course.
5. Four Weeks Livestock Course.
6. Four Weeks Cotton Classing and Marketing Course.
7. One Week Poultry Course.
8. One Week Grain Grading and Marketing Course.
9. Six Weeks Rural Engineering Course.
10. Two Weeks Beekeeping Course.
11. Two Weeks Horticulture Course.
12. Farm Congress (Farmers' Week).

## TWELVE WEEKS SHORT COURSE

The Twelve Weeks General Course is given in the winter when, as a rule, it is easier for the farmer and the farmer's boy to leave home. The work is designed to meet the needs of the general farmer. It is divided into three terms of four weeks each. Each term is a complete course in itself, although the three terms are coordinated so as to form a connected line of study and these, in turn, are associated with courses offered through a second year of instruction. Students may enter at the beginning of any term, but they are urged to take the full course so that, at the end of the second year's study, they will have gained a general knowledge of practical farm management.

Following is an outline of study for the two years' work:

## FIRST YEAR

FIRST TERM Nov. 27 to Dec. 22, 1922			SECOND TERM Jan. 3 to Jan. 27, 1923			THIRD TERM Jan. 29 to Feb. 24, 1923		
Hours			Hours			Hours		
Rec. Lab.			Rec. Lab.			Rec. Lab.		
Field Crops 1 .....	6	8	Veg. Gardening .....	6	4	Soil Physics 1 .....	6	8
Stock-Judging 1 .....	6	8	Farm Dairying 1 .....	4	8	Farm Mechanics 1 .....	6	8
Agri. Chem. 1 .....	4		Farm Poultry 1 .....	4	8	Bookkeeping 1 .....		8
Shop 1 .....		8	Library Practice 1 .....		4	Forestry and Land- scape Car. 1 .....		4
Gymnasium .....		2	Gymnasium .....		2	Gymnasium .....		2

## SECOND YEAR

FIRST TERM			SECOND TERM			THIRD TERM		
Hours			Hours			Hours		
Rec. Lab.			Rec. Lab.			Rec. Lab.		
Fruit-Growing 1 .....	6	6	Field Crops 2 .....	6	4	Animal Prod: 1 .....	3	6
Dairy Management 1 .....	6	4	Breeds and .....			Poultry-Judging 2 .....		4
Soil Fertility 1 .....	6	8	Feeding 1 .....	3	6	Shop 2 .....		8
Prices, Markets and .....			Farm Motors 1 .....	6	8	Insects and Their .....		
Credits 1 .....	3		Bacteriology 1 .....	6		Control 1 .....		3
Vet. Science 1 .....	4	6	Gymnasium .....		2	Farm Manag. 1 .....		5
Gymnasium .....		2				Rural Life and .....		
						Institutions 1 .....		3
						Gymnasium .....		2

## SUBJECTS

LIBRARY PRACTICE 1. Laboratory 4 hours per week.

This course is designed to teach the student how to look up material upon any subject in which he may be interested. Subjects will be assigned and the material covering the subject will be located in the library, read and discussed.

SHOP 1 FORGING AND IRON WORK. 8 hours per week.

Common practice in forging, building fire, drawing out, upsetting, shaping, welding, drillpress work, taps, pipefitting and soldering are taught in their practical application to farm life.

Text: "Forge Practice," Bacon.

SHOP 2 WOODWORK AND FARM CARPENTRY. 8 hours per week.

Elemental tool process used in common woodwork, care of tools, saw-sharpening, brace and rafter-cutting covered by lectures and practice on actual construction work.

Text: "Woodwork Notes," Hunt; "Carpentry," Griffith.

**FIELD CROPS 1.** Class 6 hours, laboratory 8 hours.

The various cereals and varieties of cotton which are adapted to Oklahoma conditions are studied in this course. The following subjects, as related to these crops, will be considered: Seedbed preparation, planting, cultivating, harvesting and storing. The fundamental principles of crop production are developed as demonstrated by practical experience. In the laboratory the work is devoted to grain-judging, seedbed-selection, seed-testing and the treating of seed for smut.

**SOIL PHYSICS 1.** Class 6 hours, laboratory 8 hours.

A practical course dealing with the underlying principles of soil management. Special stress will be placed on the problem of soil acidity, alkali and special crop adaptation to various types of soil.

**SOIL FERTILITY 1.** Class 6 hours, laboratory 8 hours.

In this course emphasis will be placed on crop rotation, green manure and barnyard manure as a means of maintaining soil fertility. The proper use of fertilizers, kind and applicability will be discussed.

**FIELD CROPS 2.** Class 6 hours, laboratory 4 hours.

The crops considered in the classroom are the grain sorghums and various forage crops adapted to Oklahoma. The laboratory time is taken up with the judging, selection and testing of grain sorghum heads and seeds. Weeds and weed seed, their identification, eradication and control are given considerable time.

**FARM BOOKKEEPING 1.** Laboratory 8 hours.

A practical course dealing with the underlying principles and methods of farm bookkeeping enabling the farmer to determine the yearly income. Special emphasis will be placed on cost of production, farm inventories, stock and crop accounts and their relation to the organization and management of the farm business in order to receive the greatest continuous profit from the farm.

**STOCK JUDGING 1.** Lecture 6 hours, laboratory 8 hours.

The lecture work of this course comprises a study of all the common feed stuffs of Oklahoma, including mill feeds and factory by-products, as well as those grown on the average farm. A study of the composition of feedstuffs, balancing rations, etc., will also be made.

The laboratory work includes a thorough drill in judging horses, beef cattle, dairy cattle, sheep and swine. The student first learns the use of the score card, and later judging by comparison is given. This course will be given in a practical manner. It also should be a valuable course, as some of the best stock in America will be used, including an opportunity to study the individuals which make up the College show herds.

Text: On breeding, Henry and Morrison; text on judging, "Judging Livestock," John A. Craig.

**BREEDS AND BREEDING 2.** Lecture 3 hours, laboratory 6 hours.

The lecture work will be devoted to the subject of animal-breeding. Some of the topics to be discussed are as follows: Crossing, hybridizing, grading, prepotency, linebreeding and inbreeding, and other practical subjects.

In the laboratory the judging of the different breeds of livestock will be given. The breed characteristics of each breed will be studied.

Text in animal breeding, "The Breeding of Animals," Mumford; "Judging Breeds of Livestock," Gay.

**ANIMAL PRODUCTION 1.** Lecture 3 hours, laboratory 6 hours.

The lecture work will be taken up with a study of the best practices

for the production of beef cattle, dairy cattle, horses, sheep and swine. Caring, housing and practical feeding methods will also be discussed.

The laboratory work in the third period will be known as Advanced Stock Judging. Plenty of drill in judging will be given, and from this class a student judging team will be selected to compete at the Southwest American Livestock Show, Oklahoma City, each year.

#### FARM MECHANICS 1. Class 6 hours, laboratory 8 hours.

A study of the implements and machines used in the production of the common field crops along with laboratory in rope work, mechanical devices, and terracing.

#### FARM MOTORS 1. Class 6 hours, laboratory 8 hours.

A practical course is given in the operation and working principles of the various types of stationary gas and oil engines, and tractors. Special emphasis is given to the practical application of the tractor and power to farm use.

#### INSECTS AND THEIR CONTROL 1. Class 3 hours.

General lectures will be given pertaining to the control of insects injurious to field crops, horticulture and gardens. The lecture will either be accompanied by lantern slide illustrations or with exhibits of the pests under consideration. Control methods will be demonstrated when possible.

#### FARM POULTRY 1. Class 4 hours, laboratory 8 hours.

This is a practical course in poultry, aiming to fit the person to give more intelligent care to the farm flock. It will also give a good foundation to any one wanting to go into the poultry business on a specialized basis.

This course will include work upon the identification of breeds and varieties, housing, feeding, diseases, marketing, breeding for egg production, caponizing, incubation and brooding, and poultry management.

All the facilities of our large poultry plant, including twenty-seven pens of fifteen different breeds and varieties, latest model incubators, and blue-flame coal oil burning brooders, will enable the actual work being done with all these necessary poultry appliances.

#### POULTRY JUDGING 2. Laboratory 4 hours.

Poultry judging and preparing birds for show purposes will be discussed and the actual work done. Our fifteen varieties of poultry, representing nearly all the different types, color and feather patterns in poultry, will assure the subject being covered in a broad way.

#### FARM DAIRYING 1. Class 4 hours, laboratory 8 hours.

Lectures and laboratory work on the testing of milk and cream by the Babcock test; the production, care and handling of milk and cream for city markets and creameries; the care and ripening of cream for farm butter-making; care and operation of cream separators; and the marketing of dairy products. The course offers practical instruction in all branches of farm dairying.

#### DAIRY MANAGEMENT 1. Class 6 hours, laboratory 4 hours.

Lectures and practical instruction in the breeding, feeding and management of dairy cattle; keeping of records and advanced registry testing; cow-testing and purebred bull associations.

#### PRICES, MARKETS AND CREDITS 1. Class 3 hours.

The basis for this course is laid in a brief comparison of the principles of economics, business and marketing. In the study of prices, markets and credits, the following points are emphasized: Effect of cost of production on price, the right price, the trend of prices of agricultural products and reasons

therefor; location of markets, creation of market demand, inside organization of markets, the improved use of market machinery by farmers, with special attention to cooperative marketing; use of money and credit in business; the advantages and dangers of credit; the organization of credit machinery, including description of Federal Farm Loan system.

**RURAL LIFE AND INSTITUTIONS 1. Class 3 hours.**

An examination of the factors underlying rural social progress and prosperity. Emphasis is given to the possibility of coordinating all the agencies of rural life. Special attention is directed to the methods by which the social advantages of city life may be brought to the farm. The farm home, consolidated school, community church, good roads, tenancy and community cooperation, are viewed in their relation to social and economic development.

**VEGETABLE GARDENING 1. Class 6 hours, laboratory 4 hours.**

This course includes the general principles of vegetable culture, dealing principally with the study of the home garden. Some attention will be given to vegetable and market gardening. Garden soils, fertilizers and various cultural features will also receive attention.

Text: "Productive Vegetable Growing," Lloyd.

Reference: "Vegetable Growing," Boyle.

**FRUIT GROWING 1. Class 6 hours, laboratory 6 hours.**

The topics considered include selection of orchard sites, choosing varieties, planting, pruning, cultivating and fertilizing. The practical work includes making of orchard plans, laying out the orchard, planting, pruning and spraying. The identification of fruits will also be given some attention.

Text: "Productive Orcharding," Sears.

Reference: "Fruit Growing in Arid Regions," Paddock and Whipple.

**FORESTRY AND LANDSCAPE GARDENING 1. Class 4 hours.**

This work takes up the study of the needs of Oklahoma farms for wind breaks and woodlots with special reference to their value as protection to buildings, orchards and fields, as well as their value for fuel and post purposes.

The fundamental principles involved in planting and arranging the home and public grounds will also be briefly considered.

Theory work given by lecture.

Reference: "Farm Forestry," Ferguson; "Landscape Gardening as Applied to Home Decoration," Maynard.

**BACTERIOLOGY 1. Class 6 hours.**

This work will consist of a series of lectures and demonstrations dealing with rural sanitation, causes and means of control of the more common infectious diseases of livestock. Current bulletins dealing with diseases of livestock will be used as references. No text will be required.

**VETERINARY MEDICINE 1. Class 4 hours, laboratory 6 hours.**

The object of this course will be to acquaint the student with the more common diseases of livestock. Prevention of diseases and care of stock will receive more attention than treatment. Frequent clinics will be held to familiarize students with location of various troubles. Students will be given opportunity to know the current methods of vaccinating hogs, cattle and other farm animals.

Text: "Diseases of Farm Animals," Craig.

**AGRICULTURAL CHEMISTRY 1. Four lectures each week.**

A brief informational course intended to acquaint the student with the more important applications of chemistry to practical agriculture. The lec-

tures are accompanied with mimeographed outlines and very numerous demonstration experiments.

SHOP 1 FORGING AND IRON WORK. 8 hours per week.

#### *SIX WEEKS DAIRY COURSE.*

(November 13 to December 22, 1922)

The Six Weeks Short Course in Dairying is for the training of two classes of students who cannot attend the regular agricultural course of four years but who want a short specialized training.

1. In Dairy Manufacturing.
2. In Dairy Production and Management of Dairy Cattle.

1. The dairy manufacturing course includes instruction in ice cream making, butter making, cheese making and the pasteurization of market milk. Cottage cheese making, commercial buttermilk and all modern tests of dairy products also are a part of the course.

A modern commercial creamery, including machinery and apparatus for manufacturing all dairy products by approved methods, is operated throughout the year and provides a laboratory for practical work which all students are required to have.

The course includes lectures, text book study, laboratory work and daily practice work in the creamery.

2. The dairy production and dairy cattle course includes breeds and breeding of dairy cows, the feeding and management of dairy cows, calves and young stock, modern barn practice, record keeping and advanced registry testing.

#### *ONE WEEK ICE CREAM MAKERS' COURSE*

(January 22 to 27, 1923)

The ice cream maker's course of one week is to provide an opportunity for ice cream makers and managers of ice cream plants to spend a short time each year for special instruction. Standardization of ice cream mixes for butterfat and solids, factors in controlling the overrun, overrun tests, pasteurization of mixes, acidity tests, butterfat tests and solids determinations by various methods, are some of the subjects included in the course. Additional tests such as the efficiency of gelatine, milk powders, ice cream powders and improvers are of special interest to ice cream factories. An annual educational ice cream scoring contest is a feature of the course.

For further information and special circular, write to Dairy Department, A. and M. College, Stillwater, Oklahoma.

### *ONE WEEK CREAMERYMAN'S COURSE*

(February 12 to 18, 1923)

The creameryman's course of one week affords an opportunity for creamerymen, creamery field men and buttermakers to receive a short training in the latest methods and practices of creamery butter making as well as providing a conference week for the creamerymen of Oklahoma.

The annual educational butter scoring contest is a feature of the course.

A special circular and program of the course and conference can be obtained by writing to the Dairy Department, A. and M. College, Stillwater, Oklahoma.

### *LIVESTOCK SHORT COURSE*

A short course for herdsmen of four weeks duration has been planned at the College for the coming winter. This course will open just after the Christmas holidays and continue through the four weeks following. The course will provide for both technical and practical training that is necessary to fit men to feed and care for purebred livestock. It will be organized solely for the purpose of training herdsmen to care for all kinds of stock. The course is intended not only for those starting as herdsmen, but also for the men who have had some practical experience and desire to gain in knowledge.

The purebred livestock industry is on the increase in every section of the State. Trained herdsmen are needed and will be in greater demand to care for herds than ever before. Stock breeders are looking for men who are trained both in the technical and practical work. Many are willing to pay good salaries and provide such men with opportunities so that they can make a success. It is with this idea in view that such a course is offered. There also will be a breeders' day and swine breeders' meeting and sale.

### *COTTON SHORT COURSE*

The Cotton Short Course is designed to give practical instruction in cotton from the field to the spinner, including such subjects as cotton grading, stapling, shipping, warehousing, ginning,

exporting and marketing. The course is given in July and covers a period of four weeks.

#### *POULTRY SHORT COURSE*

A short course in poultry of one week will be held some time in January. All of the vital problems such as feeding for egg production, breeding for egg production, culling, housing, incubation and brooding, diseases, marketing, and judging poultry will be gone into thoroughly.

All the equipment on the 13-acre plant will be available, including the 19,000-egg capacity incubator cellar, fifteen different pens of birds, many different makes of brooding equipment, fifteen different breeds, etc.

This affords a good opportunity for the busy farmer or poultryman to get information regarding his poultry at a time of the year when his work is not piled up, and at a time just preceding his busy season with poultry. The knowledge will be fresh in his mind for this period.

#### *GRAIN GRADING AND MARKETING*

A two-weeks course will be given in June on the commercial grades of grain and marketing small grains. This course is given at this time because of the opportunity to study the varieties of grains on the Experiment Station farm which are then grown. Our laboratories are equipped with apparatus for grading and testing small grain. This course should appeal to the farmers who wish to market their grain intelligently and to managers of elevators who wish to understand more thoroughly the commercial grades of grain and the problems of marketing.

#### *RURAL ENGINEERING SHORT COURSE*

A course on Farm Tractors lasts two weeks and consists of two lectures and six laboratory hours per day. It covers the subject matter most important to the owner and operator in obtaining a good working knowledge of the machine. Tractor manufacturers send experts to assist in the laboratory instruction whenever the enrollment warrants.

A one week course is given in the use of leveling and ditching devices for the purpose of reclaiming land that is waste because of erosion, standing water, or natural deposits insofar as such land can be reclaimed. Oklahoma has much land that needs terracing, drainage, and chemical treatment.

A one week course also is given in water systems and sewage disposal for farm homes along with a study of windmill pumps, septic tank design, and principles of sanitation.

A two weeks course in designing farm buildings with reference to permanence, convenience, adaptability, and beauty is offered. Registrants for this course should have some previous knowledge of building construction and elements of drawing. Especially valuable to country carpenters and county agents who are called on to assist farmers in their building problems.

#### *TWO WEEKS SHORT COURSE IN BEEKEEPING*

A two weeks short course in beekeeping will be given during the first two weeks of January, consisting chiefly of lectures in both theory and practice. All necessary materials, except note books, will be furnished by the department. Final examination is not compulsory, but anyone passing the examination may obtain a certificate to that effect. A circular giving further information pertaining to this course will be given upon application.

#### *SHORT COURSE IN FRUIT GROWING*

A one week short course in fruit growing deals with propagation, planting, cultivation and harvesting of apples. Some time also is given to making orchard plans, laying out of orchard, planting, pruning and preparation and application of various spray mixtures. All the practical work will be conducted in the College orchards. Most of the time will be given to apple culture. However, the other varieties of fruit as well as the nuts will receive attention.

#### *FARM CONGRESS*

In the latter part of the summer, just before school opens, we have each year a Farm Congress where farmers and club boys and girls can come for a week and hear noted lecturers on current problems in agriculture, and where a short course is given on some of the important problems with which farmers are having to deal. These courses are made as practical as possible. During the farmers' week one of the special features of the work is the observation trips where the farmers are given an opportunity to study the various departments of the College, the livestock, field experiments, horticulture, and poultry work, securing information that is not available in the form of publications. Then, too, it is the custom for many of the leading agricultural and livestock associations to hold their annual meeting in Stillwater during Farm Congress week. Two hours each day are set aside for association meetings. Many of the farmers come in automobiles and provision is made for them to camp. In fact, the College, with its resources, is turned over to the farmers for that one week.

## STATION STAFF

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- JAMES BURNETTE ESKRIDGE, A. M., Ph. D.; *President of the College.*
- MALCOLM ALFRED BEESON, B. S., D. Sc.; *Dean of the Division of Agriculture.*
- CARR THOMAS DOWELL, B. A., B. S., Ph. D.; *Director of Experiment Station and Station Chemist.*
- MONROE JOB OTEY, B. S.; *Financial Secretary and Purchasing Agent.*
- LOWERY LAYMON LEWIS, B. S. A., M. S., D. V. M.; *Veterinarian.*
- CHARLES EMERSON SANBORN, A. B., A. M.; *Entomologist.*
- FRED MAAS ROLFS, B. S., M. S., Ph. D.; *Horticulturist and Horticultural Pathologist.*
- ARTHUR CHRISTOPHER BAER, B. S. A.; *Dairyman.*
- CHARLES OSCAR CHAMBERS, A. B., A. M., Ph. D.; *Botanist.*
- HARRY EMBLETON, B. S.; *Poultryman.*
- WARREN LALE BLIZZARD, B. S.; *Animal Husbandman.*
- JOHN EARL GUBERLET, A. B., A. M., Ph. D.; *Parasitologist.*
- CARL POLLARD THOMPSON, B. S., M. S.; *Associate Animal Husbandman.*
- CLARENCE HAMILTON McELROY, B. S., D. V. M.; *Associate Bacteriologist.*
- ADRIAN DAANE, Ph. B., M. S.; *Associate Agronomist.*
- ARTHUR D. BURKE, B. S., M. S.; *Associate Dairyman.*
- GLEN BRIGGS, B. S., M. S.; *Associate Agronomist.*
- WILLIAM GUSTAV FRIEDEMANN, B. S., M. S.; *Assistant Chemist.*
- HENRY FRED MURPHY, B. S.; *Assistant Agronomist.*
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- ALBERT EDWARD DARLOW, B. S.; *Assistant Animal Husbandman.*
- WILLIAM AMBROSE RADSPINNER, B. S., M. A.; *Assistant Horticulturist.*
- WILLIAM EDGAR JACKSON, B. S., M. S.; *Assistant Entomologist.*
- MARGARET RAY BEARD; *Executive Clerk.*

## THE AGRICULTURAL EXPERIMENT STATION

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The Agricultural Experiment Station was located at the A. and M. College at Stillwater in July, 1891, under a provision of an Act of Congress approved March 2, 1887, commonly known as the Hatch Act, and entitled "An Act to establish Agricultural Experiment Stations in connection with colleges established in the several States under the supervision of an Act approved July 2, 1862, and of Acts supplementary thereto." The objects of the Experiment Station are clearly set forth in the second section of the Act as follows:

"That it shall be the object and duty of said Experiment Stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued in a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural and artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of different kinds of foods for domestic animals; the scientific and economic questions in the production of butter and cheese; and such researches and experiments bearing directly on the agricultural industry in the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States and Territories."

At the present time the Oklahoma Agricultural Experiment Station receives funds for its support from two sources, namely:

The Hatch and Adams appropriations are received from the Federal Government in amounts of \$15,000 each per annum, as provided for by Act of Congress, March 2, 1887, and March 16, 1906, respectively. The Experiment Station also has use of certain State funds appropriated by the state legislature for maintenance and support of the Experiment Station. During the past fiscal year this latter fund was \$10,500. This does not include the cost of heating, lighting, janitor service and other items of general administrative expense. This makes a total of \$40,500, which has been the amount received for the past two years.

Under the Federal Law, the Adams fund must be spent strictly for original research of approved character, and may not be used for general administration, for printing or for farm demonstrations. The Hatch appropriations may be used for general research, for general administration of the Station, and for printing. The State

funds received through appropriation by the Board of Agriculture may be used for general maintenance purposes as well as research.

Two rather broad general divisions are recognized in the work of the Station. The one includes investigational work of an original nature of a character which satisfies the requirements of the Adams Act. This work usually is such that it covers a period of years, and of such nature that it seeks to discover underlying principles and truths which may have a bearing upon some phase of the science of agriculture. The studies to come in this general division must be exhaustive and results should be a distinct addition to the science of agriculture. All other work of a research nature, which may not necessarily be original, or of the highest type, which is carried on at the Experiment Station, is grouped in the second division. Many of the subjects of research are not designed to be exhaustive, but rather to answer many of the immediate questions which should be answered for the people of the State who are directly or indirectly interested in agriculture. Upon the other hand, investigations begun and classed in the second division many times develop to the point that they are placed in the first division.

At present the lines of investigation pursued include experiments in soils, crops and fruits; breeding of livestock; feeds and feeding; insect pests, economic insects; poultry and egg production and poultry-feeding; plant and animal parasites, plant and animal disease, their control and eradication; butter, cheese and ice cream manufacture, etc.

The investigations are designed especially to further the progress of agriculture in Oklahoma, with special reference to the soil and climatic conditions.

This very wide range of investigational and experimental work is of itself an educational feature of the College. Students have opportunities to study methods of attacking problems, and many of them are employed in the laboratories and experimental plants, where they may study problems at first hand.

Each year an annual report is published giving a resume of the work accomplished the past year. Short articles often are included. These reports become a valuable history of the work and progress of the Station.

The results obtained in the various lines of experimental work are published in bulletins. In addition to the regular bulletins, giving the results of work, a series of popular publications known as

circulars are issued from time to time as conditions would seem to warrant to be used by the Extension Service and Experiment Station in distributing valuable information to the farmers.

A mailing list is maintained which numbers at the present about 17,000 names, principally of farmers, in various parts of the State. Any citizen of the State interested in agriculture may have the bulletins and other publications from the Station sent free on application to the Director of the Experiment Station, Stillwater, Oklahoma.

Such portions of the College farm, which comprises 920 acres, as are needed for Experiment Station and research work, are set aside for this purpose; also such livestock as is needed for feeding experiments is utilized by the Station. All the scientific laboratories of the College are available for research work, and many of the scientific departments of the institution are interested in carrying on different projects under the supervision of the Experiment Station officers.

## EXTENSION STAFF

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JAMES BURNETTE ESKRIDGE, A. M., Ph. D.; *President of the College.*  
MALCOLM ALFRED BEESON, B. S., D. Sc.; *Dean of the Division of Agriculture.*  
WILLIAM AMMON CONNER, B. S. Oklahoma Agricultural and Mechanical College; *Director of Extension.*  
WALTER DIMMITT BENTLEY, *Assistant Director of Extension.*  
WILLIAM RILEY SHELTON, *State Agent.*  
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ANNIE PETERS HUNTER .....	Boley, Okfuskee County and Seminole County
MAUD SMITH .....	Okmulgee, Okmulgee County and McIntosh County
EDNA L. LEWIS .....	Chandler, Lincoln, Logan and Oklahoma Counties

## THE EXTENSION DIVISION

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All lines of extension activities in agriculture and home economics of the Agricultural and Mechanical College and United States Department of Agriculture in Oklahoma are carried on under the direction and general supervision of the Director of Extension. The heads of the various departments of the College are considered final authority on all subject matter problems. In addition to the Director, there is a supervisory force composed of an Assistant Director, State Agent, a State Home Demonstration Agent, five district agents for men agents, five district agents for women agents and one negro district agent for negro agents.

The work of the Extension Division is carried on under fourteen projects, as follows: Administration, Printing and Distribution, County Agents, Boys' Club Work, Home Demonstration Agents and Girls' Club Work, Poultry Club Work, Dairy Extension Work, Horticulture and Gardening, Livestock Extension Work, Farm Engineering Work, Agronomy, Rodent Eradication, Extension Work for Negro Men and Boys and Extension Work for Negro Women and Girls.

Including the supervisory and clerical forces there are 167 persons employed in the Extension Division. There are seventy-four county agents, thirty-eight home demonstration agents, and fourteen negro agents.

### COUNTY AGENT WORK

The county agents are the direct representatives of the A. and M. College and the U. S. Department of Agriculture in their respective counties. They are employed under a cooperative agreement between the National Department of Agriculture, the Agricultural College Extension Service and the respective counties. The work is supervised by the Extension Division of the A. and M. College.

The Extension Division is organized under the provisions of the Smith-Lever Law which provides for cooperative extension work in agriculture and home economics among the rural people of the several states. Its purpose is, in the language of the law, "To aid

in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics and to encourage the application of the same." The necessary funds for the support of the Extension Division are provided by state, county and federal appropriations.

The duties of the county agents are to give assistance and instruction to farmers in better methods of agriculture, including farm practices and management, the raising and marketing of crops and livestock, etc., and to supervise practical demonstrations illustrating the same.

County agents assist in the organization of cow testing associations, purebred livestock associations, pure seed breeders associations, livestock shippers associations, cooperative marketing and similar associations. They also encourage organization for educational development such as the county and community free fair associations, etc.

Since the method of the county agent is to teach by demonstrations rather than by lectures, his only means of reaching the community is through community organizations. So he labors continually with three prime objects in view for the community; namely, organization, standardization and cooperation. The county agent seeks to organize the community in order that he may be able to reach the entire citizenship along all lines tending to the improvement of rural conditions. He is an advocate of standardization of farm products as a basic principle for securing better marketing conditions. He favors cooperation as a means of eliminating waste in marketing farm products and also as the most effective way of securing better roads, better schools, better churches, better homes and better contentment with rural life.

The county agents and home demonstration agents are expected to be fully informed on the work of the A. and M. College and the Experiment Station and be prepared to give out information concerning them and especially to assist the farmers in securing the benefits of the Experiment Station work.

#### *BOYS' CLUB WORK*

The boys' club work is supervised by the state boys' club agent and his assistants, and has for its object the instruction of rural boys in approved methods of crop, fruit and livestock production, and in conserving and increasing soil fertility with the view of increasing the financial conditions of the farmers of the future, there-

by increasing the desire and providing the means for better homes, better schools, better social and moral conditions and thereby insuring better citizenship.

Club activities supervised for boys for 1922 are as follows: Corn, Grain Sorghums (kafir, feterita, milo and darso), Cotton, Peanut, Small Grain (wheat, oats, barley), Crop Rotation (three crops), Pig (breeding and fattening), Calf (breeding and fattening), Sheep (breeding and fattening), Poultry, Bee, Potato and Fruit.

As an incentive to good club work, premiums were offered at township, county and state fairs and also scholarships to state fair schools and the A. and M. College. Reports from the counties in 1922 show that \$27,026 was offered at township and county fairs and the premiums for club work at the two state fairs amounted to \$6,969. There were 399 scholarship winners at the state fair schools. There were five boys who won Bankers' Scholarships in the A. and M. College valued at \$200 each. Two boys won scholarships in the A. and M. College offered by two large commercial associations, making a total of seven scholarships in the A. and M. College for the period of one year. Six boys won free trips to the International Fat Stock Show at Chicago.

The total number of boys' club members enrolled for the year 1921 was 23,761. The boy and girl club members form local organizations together. There were 684 such organizations during the past year, each one having its regular officers and holding monthly meetings. Organizations of this character were perfected in sixty-one counties.

Instructional work along club lines is carried on through the personal efforts of the county agents by means of club rallies, short courses and contests, the county, district and club agents cooperating, and by means of bulletins and circular letters.

#### *HOME DEMONSTRATION WORK AND GIRLS' CLUB WORK*

The home is the greatest institution of our country and it is only fitting that any measure that will place it on a higher plane of "profit, comfort, culture, influence and power" should be given the most careful attention of each person; for, as Dr. S. A. Knapp says, "Home conditions will ultimately mold the man's life."

The home economics extension work is based on the assumption that there are certain facts concerning the home, a working knowledge of which would be of great value to all women, and

that every county should have a program based upon the needs of the people that will include such knowledge.

The home demonstration agents encourage rural families to provide more and better food at lower cost, encourage club members to obtain a better education, enable the girls and women on the farms to raise more and better poultry, thus increasing the State's meat supply and increasing the family income. They endeavor to make life in rural communities more attractive and interesting and, through all these avenues, to make better homemakers and therefore better Oklahoma citizens. These agents supervise the canning, poultry and sewing clubs for girls, and home demonstration clubs for women.

The problem of feeding the family is not only the most important problem of feeding in the county but it is one that should interest every individual in it until every one be given at least the elementary principles of human nutrition. To this end classes in nutrition for growth, schools and clubs studying food preparation as well as food preservation will be fostered.

During the year 1921 there were 2,807 junior canning club members and 1,417 senior members. The object of the canning club is to teach the girls how to conserve perishable food material for future use and to provide a balanced ration for the family for the entire year.

Since this is true, the women are vitally interested in the production of poultry not only for food for their families but as a means of producing an income for their use, and therefore the home demonstration agents are giving greater attention to the improvement of its home flocks through housing, care, feeding and marketing.

During 1921 the total number of demonstrators was 6,676, there being 5,540 juniors and 1,136 seniors.

In the adult home demonstration clubs the women are studying regularly prescribed courses, taking up the various phases of home making, such as management, sanitation, household conveniences, clothing, feeding the family, the care and health of the family and interior decoration.

It is generally conceded that the work of the woman on the farm is heavy. In order that the work of the farmer's wife may be done in the best possible way with the least amount of effort and the shortest space of time at the lowest possible cost, there

should be as many labor saving devices as possible in every farm home in the State, and a united effort is made to make every farm home convenient and to equip it with such devices.

In order that a family may be properly clothed, the housewife must have a fundamental knowledge of textiles and of values. She must know how to buy as well as to make and mend and care for the clothing for every member of her family. That this knowledge might become common, classes and clubs are given demonstrations in this subject which are available to the women and girls.

In our sewing clubs there have been 1,775 junior demonstrators reporting and sixty-two adult demonstrators who were taught to dye and renovate and remodel their old clothing by home demonstration agents.

In order that the children coming from our homes shall be physically strong, morally sound, socially trained, spiritually turned, a united effort is being made to improve the environment of these children—through study, by demonstrations, by experiments and in every other possible way through the courses in home beautification, sanitation and foods.

#### *POULTRY CLUB WORK*

Poultry club work is carried on in close cooperation with the county agents and the home demonstration agents, it being considered primarily a part of the home demonstration work. The Jackson Poultry Law, providing for the holding of poultry shows at the rural schools of the State, has aroused intense interest in the keeping of more and better poultry all over the State. During the past year it has been almost impossible to meet all the demands made by the people all over the State for assistance in poultry judging, culling and lecturing on poultry subjects. There have been held in the State during the past year not less than 880 poultry shows at state, county and community fairs together with school house fairs held under the provisions of the Jackson Poultry Law. As near as can be determined 8,000 persons have made exhibits at these fairs and a total of not less than \$22,000 has been paid in premiums to these exhibitors.

#### *HORTICULTURE AND GARDENING*

The purpose of the horticultural and gardening project is to assist the county agents and home demonstration agents in demonstration and lecture work in connection with farmers' meetings,

boys' and girls' club meetings, fairs and other work intended to increase the production of fruit and garden crops in all parts of the State where they may be profitably grown; also to conduct demonstrations in pruning vines and fruit trees and spraying for fruit and garden insect pests and to give instruction on the general care of fruit and garden crops.

#### *DAIRY EXTENSION WORK*

The leader in charge of dairy extension works in close cooperation with the county and home demonstration agents, always conferring with them if at all practicable whenever a county is visited. The chief lines of work carried on are assisting in the purchase of improved dairy stock, lectures, demonstration exhibits at fairs, assistance in organizing junior dairy clubs, etc.

#### *LIVESTOCK EXTENSION WORK*

The purpose of the livestock extension project is to assist the county agent and home demonstration agent in all work intended to increase the number of livestock kept on the farms of the State wherever feed conditions will justify such increase and to improve the quality of livestock in all parts of the State, to assist in the organization of purebred livestock associations of all kinds, to provide lecturers for livestock breeders associations and other organizations of farmers and stockmen, assist with livestock judging work at fairs, give instruction in livestock judging to boys' and girls' clubs and assist in such other work as may be necessary to bring about greater efficiency among the farmers and stockmen of the State in breeding, feeding and handling of livestock of all kinds.

#### *AGRONOMY EXTENSION WORK*

The leader in charge of the agronomy project also is secretary of the state seed growers association and is giving special attention to crop improvement work, the use of commercial fertilizers, improvement of soils by liming and by crop rotation. Demonstrations for these purposes are outlined and conducted in cooperation with county agents.

#### *FARM ENGINEERING*

The extension farm engineer is in great demand for assisting county agents in tarracing, irrigation and drainage demonstrations, in planning farm buildings and in handling other farm engineering problems.

*NEGRO WORK*

Extension work in agriculture and home economics for negroes under the Smith-Lever Act is carried on in this State in cooperation with the State Colored Agricultural and Normal University at Langston. It is under the immediate supervision of a negro district agent with headquarters at Langston. There are nine men and four women negro agents working in counties having large negro farming populations. The negro agents, both men and women, give a great deal of attention to boys' and girls' club work, making very creditable exhibits at the state fairs. Negro farmers, especially the women and boys and girls, take great interest in demonstration work and have done very commendable work. Where the work with negroes has been done the longest, good results are very evident.

# **THE SCHOOL OF ENGINEERING**



## FACULTY

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- JAMES BURNETTE ESKRIDGE, A. M., Ph. D.; *President of the College.*
- RICHARD GAINES TYLER, C. E., S. B. in C. E.; *Dean of the School of Engineering, Professor of Civil Engineering.*
- \*HILTON IRA JONES, A. B., A. M., Ph. D., Fellow, The Chemical Society (London); *Professor of Chemical Engineering.*
- WILLIAM BENJAMIN PARKS, A. M., S. M., Ph. D.; *Professor of Chemical Engineering.*
- WILLIAM JASPER MILLER, E. E., S. M. E. E.; *Professor of Electrical Engineering.*
- LEREOY ALONZO WILSON, M. E., M. M. E.; *Professor of Mechanical Engineering.*
- PRESTON MURDOCH GEREN, B. S. in A. E.; *Professor of Architecture and Architectural Engineering.*
- DeWITT TALMADGE HUNT, B. S., B. M. T.; *Superintendent of Shops.*
- ROBERT DuBOIS, A. B., M. S.; *Associate Professor of Chemistry and Chemical Engineering.*
- JAMES HAROLD MURDOUGH, S. B.; *Assistant Professor of Civil Engineering.*
- ELLIS C. BAKER, B. S. in M. E.; *Assistant Professor of Mechanical Engineering.*
- JOSEPH JULIAN PATTERSON, B. S. in Arch.; *Assistant Professor of Architecture and Architectural Engineering.*
- LLOYD KEITH COVELLE, Certificate; *Assistant Professor in Shops.*
- CHARLES LESLIE NICKOLLS, B. S., M. S.; *Assistant Professor of Chemistry and Chemical Engineering.*
- EDWIN DORENCE SODERSTROM, Diploma; *Assistant Professor in Shop Practice.*
- PHILIP ARMOUR WILBUR, B. S.; *Instructor in Architecture and Architectural Engineering.*
- CHARLES VICTOR BULLEN, B. S. in E. E.; *Instructor in Electrical Engineering.*
- FRANK RUSSELL BRADLEY, *Instructor in Shops.*
- HENRY FULLER HOLTZCLAW, A. B., Ph. D.; *Dean of the School of Commerce and Marketing, Professor of Economics.*
- CARL GUNDERSEN, A. B., A. M., Ph. D.; *Professor of Mathematics.*
- EDWARD CLARK GALLAGHER, B. S.; *Director of Athletics, Professor of Physical Education.*
- JOHN HOFER CLOUD, A. B., A. M., Ph. D.; *Professor of Physics.*
- WILLIAM PTOLEMY POWELL, B. A., M. A.; *Professor of English.*
- AVERY LUVERE CARLSON, B. A., M. A., J. D.; *Professor of Business Administration.*
- DAVID TERRY MARTIN, A. B.; *Professor of Public Speaking.*
- ALMON AI ARNOLD, A. B., A. M.; *Professor of Modern Languages.*
- ROBERT E. HARTSOCK, S. B., A. B.; *Professor of Mathematics.*
- JOSEPH BENJAMIN PATE, B. A., Major, Inf., U. S. Army; *Commandant, Professor of Military Science and Tactics.*
- JOSEPH HOWARD RUSTEMEYER, Captain, Inf., U. S. Army; *Professor of Military Science and Tactics.*
- JOSEPH JOHN SCHMIDT, Captain, Inf., U. S. Army; *Professor of Military Science and Tactics.*
- JOHN MARVIN HAGENS, Captain, Inf., U. S. Army; *Professor of Military Science and Tactics.*
- CLARENCE HAMILTON McELROY, B. S., D. V. M.; *Associate Professor of Bacteriology.*
- GRACE ALICE MOUNTCASTLE, Ph. B.; *Associate Professor of English.*
- AGNES BERRIGAN, B. A., M. A.; *Associate Professor of English.*
- EWALD W. SCHUHMAN, A. B., A. M.; *Assistant Professor of Physics.*
- THOMAS MALCOLM AYCOCK, B. S.; *Assistant Professor of Physical Education.*
- LEONA KATHERINE SIEGLINGER, B. S.; *Instructor in Physics.*
- HARRIET RUBY ENSWORTH, B. A.; *Instructor in English.*
- MARY ELEANOR LOCKWOOD, A. B.; *Instructor in Modern Languages.*
- \*On leave of absence.

## THE SCHOOL OF ENGINEERING

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In compliance with the provisions of the Morrill land grant, the teaching of engineering was begun at the Oklahoma Agricultural and Mechanical College by the establishment of a course of mechanical engineering. The first class was graduated in 1902. Later courses in electrical, civil, architectural and chemical engineering were added in the order named. As far as practicable, in the development of courses, they have been kept closely related to the important industries of the State. With the growth of manufacturing, of the oil industry, the increased use of electrical power, the improvement of highways, of water supply systems, and increased interest in better buildings, the importance of having men with the proper training will be more fully recognized.

It is being recognized more and more that an engineering training makes a very desirable foundation for a business career. The training of the engineer develops the analytical type of mind which can analyze the various problems of the commercial world, a necessary qualification for the successful business man. It was this trait that made the Engineer such an important factor in the recent war.

There are two large buildings on the campus devoted to the work of instruction in engineering. These are the Engineering Building and the Shops Building. The former was erected in 1912 at a cost of \$75,000. It is three stories high, covers an area of 160 by 80 feet, and is built of reinforced concrete and brick with stone trimmings. On the ground floor are located the steam and hydraulic laboratories, the electric laboratory, the laboratories for the testing of structural materials and road materials, storage batteries, room for surveying instruments, and office of the Dean. On the next floor are the physics laboratory and lecture room, four other lecture rooms for the different departments, rooms for photometry, physical apparatus, and offices for the heads of the departments. On the top floor are the large drafting rooms, classrooms and offices for several of the departments, and rooms for the storage of records.

The Shops Building is of stone and brick, and covers an area of

40x200 feet. For a depth of 80 feet it is two stories high, and the balance one story. It provides accommodations for the wood shop, machine-shop, forge-shop and foundry, and a tool room.

The Power Plant of the College, with its steam boilers, steam engines and generators, also is used by the School of Engineering for the purpose of making tests and familiarizing the student with the use of this class of machinery.

The new Chemistry Building is used for carrying on the work in the Department of Chemical Engineering. For a description of this building, see that part of the catalog pertaining to Buildings and Equipment.

Mention should be made of the Engineering Society—an organization composed of students from the various Engineering departments. This society is a member of the Association of Collegiate Engineers, which has in its membership a large number of Engineering institutions in the Middle West. The society meets once a month for the discussion of subjects of general interest to Engineers. These meetings tend to encourage a lively interest in practical work and give the students practice in speaking before an audience.

In addition to the Engineering Society, there are located at the College student chapters of the following national Engineering Societies: American Association of Engineers, American Institute of Electrical Engineers, and American Society of Mechanical Engineers.

These organizations afford opportunities for the students to prepare reports upon problems in their own particular branch of Engineering.

#### *ADMISSION.*

The general requirements for admission to the School of Engineering are same as those admitting to the College in general.

#### *DEGREES.*

The degree of Bachelor of Science in each of the following Departments will be conferred upon graduates of those departments upon completion of two hundred and nineteen (219) credit hours as prescribed in the schedule of study: Agricultural Engineering, Architecture and Architectural Engineering, Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering.

Certificates will be given upon completion of the work as scheduled in the two Special Courses.

*PROFESSIONAL DEGREES.*

For information in regard to professional degrees in Engineering and the conditions under which they are granted to graduates of the School of Engineering, see Requirements for Graduation.

*EXPERIMENTAL WORK IN ENGINEERING*

The departments of the School of Engineering are prepared to carry on in the shops, laboratories and field, research work of value to the industries of Oklahoma. Those lines of investigation are undertaken which are important in the development of the State's resources, or in adding to the health and comfort of the people of the State.

Some of the subjects of particular interest to the people of Oklahoma are the following:

The properties of petroleum and its economical use in the industries.

The utilization of natural gas.

The examination and testing of the various structural and road materials to be found in Oklahoma.

The study of the problems of water supply and sewage disposal as related to the health of rural and urban communities.

Experimental work to determine the proper method of irrigation and drainage to suit Oklahoma conditions.

The School of Engineering will cooperate with individuals or communities in working out any problems of an engineering nature so long as they are such as will be of benefit to the general public.

*SUMMER VACATION WORK*

All engineering students are encouraged to secure work along their respective lines of engineering during their summer vacations. This work will give them a practical working knowledge of the profession which will be of assistance to them in undertaking the course taught in the College.

*INSPECTION TRIPS*

Inspection trips are taken to the surrounding cities where work of particular interest to Engineers is in progress. The cooperation of city and state officials and managers of industrial and manufacturing plants is secured and the students are thus permitted to gain first hand information of methods and materials. These trips are carried out under the supervision of the Faculty and are planned

or Junior and Senior Engineering students. They are supplemented also by trips to the various plants and other local points of interest in Stillwater and vicinity.

### ENGINEERING ADMINISTRATION.

A new course is being offered combining the principal requirements for an Engineering degree together with main features in the degree of Commerce and Marketing.

This course, Engineering Administration, is being given to meet the demand for training technical experts for administrative positions. The modern industrial plant requires, as a manager, the man who is both an Engineer and an Administrator. In municipal work the city manager usually has been selected from the Engineering profession and often finds himself deficient in business methods and other questions of business administration. It is to supply men of this character that this course has been designed and is being offered.

For schedule of the first two years, see announcement in the School of Commerce and Marketing.

### AGRICULTURAL ENGINEERING

The course of study in Agricultural Engineering has the joint approval of the Dean of Agriculture and the Dean of Engineering. For a detailed statement of the curriculum see School of Agriculture.

### COURSES IN THE SCHOOL OF ENGINEERING

The following outline of study represents the required and elective work in the School of Engineering. The courses are numbered, beginning with one hundred in the Freshman year. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken. In the outline below, figures without parenthesis indicate hours of classwork, in parenthesis hours of laboratory work.

### ARCHITECTURE

#### FRESHMAN YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Math. 112, College Algebra .....	3	3	Math. 113, College Algebra .....	3	3
Math. 114, Trigonometry .....	3	3	Math. 115, Analytics .....	3	3
Eng. 130, College .....	3	3	Eng. 131, College .....	3	3
Chem. 106, Inorganic .....	3 (3)	4	Chem. 107, Inorganic .....	3 (3)	4
Arch. 118, Descriptive Geom. ....	2	2	Arch. 119, Descriptive Geom. ....	(6)	2
Arch. 121, Freehand Drawing ....	(3)	1	Arch. 122, Freehand Drawing ....	(3)	1
Arch. 124, Elements .....	(6)	2	Arch. 125, Elements .....	(6)	2
Phy. Edu. 131 .....	(3)	1	Phy. Edu. 132 .....	(3)	1
Mil. Sci. 101 .....	(3)	1	Mil. Sci. 102 .....	(3)	1

## Oklahoma A. and M. College

## SPRING QUARTER

	Hrs.	Cr.
Math. 116, Analytics .....	3	3
Eng. 132, College .....	3	3
Chem. 108, Inorganic .....	3 (3)	4
Arch. 120, Descriptive Geom. ....	(6)	2
Arch. 123, Freehand Drawing .....	(3)	1
Arch. 126, Elements .....	(6)	2
Phy. Edu. 133, .....	(3)	1
Mil. Sci. 103 .....	(3)	1

## SOPHOMORE YEAR

## FALL QUARTER

	Hrs.	Cr.
Physics 115, Mechanics .....	2 (3)	3
Arch. 216, Building Cons. ....	2 (3)	3
Arch. 219, History .....	2	2
Arch. 222, Applied Mechanics ....	3	3
Arch. 225, Freehand Drawing .....	(6)	2
Arch. 228, Design .....	(9)	3
Mil. Sci. 201 .....	(3)	1

## WINTER QUARTER

	Mrs.	Cr.
Physics 116, Heat and Electricity ..	2 (3)	3
Pub. Spk. 131, Essentials .....	2	2
Arch. 217, Building Construction ..	2 (3)	3
Arch. 220, History .....	2	2
Arch. 223, Applied Mechanics ....	3	3
Arch. 226, Freehand Drawing .....	(6)	2
Arch. 229, Design .....	(9)	3
Mil. Sci. 202 .....	(3)	1

## SPRING QUARTER

	Hrs.	Cr.
Physics 117, Sound and Light .....	2 (3)	3
C. E. 213, Plane Surveying .....	(3)	1
Arch. 218, Building Construction ..	2	2
Arch. 221, History .....	2	2
Arch. 224, Applied Mechanics ....	3 (3)	4
Arch. 227, Freehand Drawing .....	(6)	2
Arch. 230, Design .....	(9)	3
Mil. Sci. 203 .....	1 (2)	1½

## JUNIOR YEAR

## FALL QUARTER

	Hrs.	Cr.
Arch. 324, Framed Structures ....	1 (6)	3
Arch. 327, History .....	2	2
Arch. 330, Working Drawings ....	(6)	2
Arch. 332, Freehand Drawing .....	(6)	2
Arch. 335, Design .....	(15)	5
Electives .....	3	3

## WINTER QUARTER

	Mrs.	Cr.
Arch. 325, Framed Structures ....	1 (6)	3
Arch. 326, Reinforced Concrete ....	3	3
Arch. 328, History .....	2	2
Arch. 331, Working Drawings .....	(6)	2
Arch. 333, Freehand Drawing .....	(6)	2
Arch. 336, Design .....	(15)	3
Electives .....		3

## SPRING QUARTER

	Hrs.	Cr.
E. E. 320, Wiring and Illuminations ..	2	2
Arch. 344, Concrete Structures .....	1 (6)	3
Arch. 329, History .....	2	2
Arch. 334, Freehand Drawing .....	(6)	2
Arch. 337, Design .....	(15)	5
Electives .....	3	3

## SENIOR YEAR

## FALL QUARTER

	Hrs.	Cr.
Econ. 218, Principles .....	3	3
M. E. 322, Steam and Gas Engines ..	3 (3)	4
Arch. 420, Freehand Drawing .....	(6)	2
Arch. 423, Design .....	(21)	7
Electives .....	2	2

## WINTER QUARTER

	Mrs.	Cr.
Econ. 219, Current Problems .....	3	3
M. E. 437, Heating and Vent. ....	3	3
Arch. 421, Freehand Drawing ....	(6)	2
Arch. 424, Design .....	(21)	7
Electives .....		3½

## SPRING QUARTER

	Hrs.	Cr.
Com. 443, Business Law .....	3	3
Arch. 422, Freehand Drawing .....	(6)	2
Arch. 425, Design .....	(21)	7
Electives .....	5	5

## ARCHITECTURAL ENGINEERING

## SOPHOMORE YEAR

## FALL QUARTER

	Hrs.	Cr.
Math. 112, College Algebra .....	3	3
Math. 114, Trigonometry .....	3	3
Physics 115, Mechanics .....	2 (3)	3
Eng. 130, College .....	3	3
Chem. 106, Inorganic .....	3 (3)	4
Arch. 121, Freehand Drawing .....	(3)	1
Arch. 127, Elements .....	(3)	1
Phy. Edu. 131 .....	(3)	1
Mil. Sci. 101 .....	(3)	1

## WINTER QUARTER

	Mrs.	Cr.
Math. 113, College Algebra .....	3	3
Math. 115, Analytics .....	3	3
Physics 116, Heat and Elec. ....	2 (3)	3
Chem. 107, Inorganic .....	3 (3)	4
Eng. 131, College .....	3	3
Chem. 107, Inorganic .....	3 (3)	4
Arch. 122, Freehand Drawing ....	(3)	1
Arch. 128, Elements .....	(3)	1
Phy. Edu. 132 .....	(3)	1
Mil. Sci. 102 .....	(3)	1

SPRING QUARTER

	Hrs.	Cr.
Math. 116, Analytics .....	3	3
Physics 117, Sound and Light .....	2 (3)	3
Eng. 132, College .....	3	3
Chem. 108, Inorganic .....	3 (3)	4
Arch. 123, Freehand Drawing .....	(3)	1
Arch. 129, Elements .....	(3)	1
Phy. Edu. 133 .....	(3)	1
Mil. Sci. 103 .....	(3)	1

SOPHOMORE YEAR

FALL QUARTER

	Hrs.	Cr.
Math. 210, Calculus .....	3	3
Physics 206, Advanced .....	3 (3)	4
Arch. 216, Building Construction .....	2 (3)	3
Arch. 118, Descriptive Geom. ....	2	2
Arch. 219, History .....	2	2
Arch. 231, Freehand Drawing ....	(3)	1
Arch. 233, Design .....	(6)	2
Mil. Sci. 201 .....	(3)	1

WINTER QUARTER

	Hrs.	Cr.
Math. 211, Calculus .....	3	3
Physics 207, Advanced .....	3 (3)	4
Pub. Spk. 131, Essentials .....	2	2
Arch. 217, Building Cons. ....	2 (3)	3
Arch. 119, Descriptive Geom. ....	(6)	2
Arch. 220, History .....	2	2
Arch. 232, Freehand Drawing ....	(3)	1
Arch. 234, Design .....	(6)	2
Mil. Sci. 202 .....	(3)	1

SPRING QUARTER

	Hrs.	Cr.
Math. 212, Calculus .....	3	3
C. E. 209, Ele. Surveying .....	1 (3)	2
Physics 208, Advanced .....	3 (3)	4
Arch. 218, Building Construction ..	2 (3)	3
Arch. 120, Descriptive Geom. ....	(6)	2
Arch. 221, History .....	2	2
Arch. 235, Design .....	(3)	1
Mil. Sci. 203 .....	(3)	1

JUNIOR YEAR

FALL QUARTER

	Hrs.	Cr.
C. E. 310, Applied Mechanics ....	4	4
C. E. 324, Testing Laboratory ....	(3)	1
Arch. 327, History .....	2	2
Arch. 330, Working Drawings ....	(6)	2
Arch. 338, Freehand Drawing .....	(3)	1
Arch. 341, Design .....	(9)	3
Electives .....		3

WINTER QUARTER

	Hrs.	Cr.
C. E. 319, Applied Mechanics .....	4	4
C. E. 325, Testing Laboratory .....	(3)	1
C. E. 321, Framed Structures ....	3 (3)	4
Arch. 328, History .....	2	2
Arch. 331, Working Drawings ....	(6)	2
Arch. 339, Freehand Drawing ....	(3)	1
Arch. 342, Design .....	(9)	3
Electives .....		3

SPRING QUARTER

	Hrs.	Cr.
C. E. 320, Applied Mechanics .....	4	4
C. E. 326, Testing Lab. ....	(3)	1
C. E. 322, Framed Structures ....	3 (3)	4
Arch. 329, History .....	2	2
Arch. 340, Freehand Drawing .....	(3)	1
Arch. 343, Design .....	(9)	3
Electives .....		3

SENIOR YEAR

FALL QUARTER

	Hrs.	Cr.
C. E. 418, Structural Design .....	1 (6)	3
C. E. 420, Reinforced Concrete .....	3	3
M. E. 322, Steam and Gas Engines ..	3 (3)	4
E. E. 434, Elements .....	3	3
Econ. 218, Principles .....	3	3
Electives .....		2

WINTER QUARTER

	Hrs.	Cr.
C. E. 419, Structural Design .....	1 (6)	3
C. E. 421, Concrete Structures ....	1 (6)	3
M. E. 437, Heating and Vent. ....	3	3
E. E. 436, Elements .....	3	3
E. E. 431, Laboratory .....	(6)	2
Econ. 219, Current Problems ....	3	3
Electives .....		2

SPRING QUARTER

	Hrs.	Cr.
C. E. 422, Concrete Structures .....	1 (6)	3
E. E. 439, Laboratory .....	(6)	2
Com. 443, Business Law .....	3	3
Electives .....		6

## CHEMICAL, CIVIL, ELECTRICAL AND MECHANICAL ENGINEERING

FRESHMAN YEAR  
(Common to all Courses)

FALL QUARTER		WINTER QUARTER	
	Hrs. Cr.		Hrs. Cr.
Eng. 130, College .....	3 3	Eng. 131, College .....	3 3
Math. 112, College Algebra .....	3 3	Math. 113, College Algebra .....	3 3
Math. 114, Trigonometry .....	3 3	Math. 115, Analytics .....	3 3
Physics 115, Mechanics .....	2 (3) 3	Physics 116, Heat and Electricity .....	2 (3) 3
Chem. 106, Inorganic .....	3 (3) 4	Chem. 107, Inorganic .....	3 (3) 4
M. E. 106, Engineering Draw. ....	(6) 2	M. E. 107, Engineering Drawing .....	(6) 2
Phy. Edu. 131 .....	(3) 1	Phy. Edu. 132 .....	(3) 1
Mil. Sci. 101 .....	(3) 1	Mil. Sci. 102 .....	(3) 1

SPRING QUARTER		Hrs.	Cr.
Eng. 132, College .....	3	3	
Math. 116, Analytics .....	3	3	
Physics 117, Sound and Light .....	2 (3)	3	
Chem. 108, Inorganic .....	3 (3)	4	
M. E. 108, Elements of Drafting .....	(6)	2	
Phy. Edu. 133 .....	(3)	1	
Mil. Sci. 103 .....	(3)	1	

## CHEMICAL ENGINEERING

## SOPHOMORE YEAR

FALL QUARTER		WINTER QUARTER	
	Hrs. Cr.		Hrs. Cr.
Math. 210, Calculus .....	3 3	Math. 211, Calculus .....	3 3
Physics 206, Advanced .....	3 (3) 4	Physics 207, Advanced .....	3 (3) 4
Mod. Lang. ....	3 3	Mod. Lang. ....	3 3
Chem. 216, Qual. Analysis .....	3 (6) 5	Chem. 221, Quan. Analysis .....	2 (9) 5
Shop 221, Machine Work .....	(3) 1	Shop 222, Machine Work .....	(3) 1
Mil. Sci. 201 .....	(3) 1	Mil. Sci. 202 .....	(3) 1

SPRING QUARTER		Hrs.	Cr.
Math. 212, Calculus .....	3	3	
Physics 208, Advanced .....	3 (3)	4	
Mod. Lang. ....	3	3	
Chem. 217, Mineralogy .....	1 (6)	3	
Chem. 222, Quan. Analysis .....	2 (9)	5	
Shop 223, Machine Work .....	(3)	1	
Mil. Sci. 203 .....	(3)	1	

## JUNIOR YEAR

FALL QUARTER		WINTER QUARTER	
	Hrs. Cr.		Hrs. Cr.
Chem. 330, Organic .....	3 (6) 5	Chem. 331, Organic .....	3 (6) 5
Shop 323, Acetylene Welding .....	(3) 1	Chem. 335, Petroleum Tech. ....	3 (6) 5
C. E. 426, Highway Lab. ....	(3) 1	Mod. Lang. ....	5 5
M. E. 322, Steam and Gas Engines .....	3 3	M. E. 435, Ind. Org. and Mgt. ....	2 2
C. E. 424, Water Supply .....	3 3	C. E. 427, Highway Lab. ....	(3) 1
Bact. 316, General .....	3 (6) 5		

SPRING QUARTER		Hrs.	Cr.
Chem. 332, Organic .....	3 (6)	5	
Mod. Lang. ....	5	5	
M. E. 436, Ind. Organ. and Mgt. ....	2	2	
Electives .....		2	
Com. 443, Business Law .....	3	3	

## SENIOR YEAR

FALL QUARTER		WINTER QUARTER	
	Hrs. Cr.		Hrs. Cr.
Chem. 433, Physical .....	3 (6) 5	Chem. 434, Physical .....	3 (6) 5
Chem. 436, Industrial .....	3 (6) 5	Chem. 437, Industrial .....	3 (6) 5
Chem. 444, Seminar .....	1 1	Chem. 445, Seminar .....	1 1
Chem. 439, Advanced Analysis .....	1 (6) 3	Chem. 440, Advanced Analysis .....	1 (6) 3
E. E. 434, Elements .....	3 3	E. E. 436, Elements .....	3 3
		E. E. 431, Laboratory .....	(6) 2

SPRING QUARTER		Hrs.	Cr.
Chem. 435, Physical .....	3 (6)	5	
Chem. 433, Industrial .....	3 (6)	5	
Chem. 446, Seminar .....	1	1	
Chem. 441, Advanced Analysis .....	1 (6)	3	
E. E. 439, Laboratory .....	(6)	2	

## CIVIL ENGINEERING

## SOPHOMORE YEAR

## FALL QUARTER

	Hrs.	Cr.
Math. 210, Calculus .....	3	3
Physics 206, Advanced .....	3 (3)	4
Eng. 224, Composition .....	3	3
C. E. 206, Surveying .....	2	2
C. E. 210, Fieldwork .....	(3)	1
M. E. 206, Descriptive Geom. ....	3	3
Chem. 225, Tech. Analysis .....	1 (3)	2
Mil. Sci. 201 .....	(3)	1

## WINTER QUARTER

	Hrs.	Cr.
Math. 211, Calculus .....	3	3
Physics 207, Advanced .....	3 (3)	4
Eng. 225, Composition .....	3	3
C. E. 207, Railroad Curves .....	3	3
C. E. 211, Fieldwork .....	(3)	1
Pub. Spk. 131 .....	2	2
Chem. 226, Tech. Analysis .....	1 (3)	2
Mil. Sci. 202 .....	(3)	1

## SPRING QUARTER

	Hrs.	Cr.
Math. 212, Calculus .....	3	3
Physics 208, Advanced .....	3 (3)	4
Eng. 225, Tech. Writing .....	3	3
C. E. 203, Railroad Earthwork .....	3	3
C. E. 212, Fieldwork .....	(3)	1
Math. 213, Spher. Trigonometry ..	2	2
Chem. 227, Tech. Analysis .....	1 (3)	2
Mil. Sci. 203 .....	1 (2)	1½

## JUNIOR YEAR

## FALL QUARTER

	Hrs.	Cr.
C. E. 318, Applied Mechanics .....	4	4
C. E. 330, Higher Surveying .....	(3)	1
C. E. 327, Highway Engr. ....	3	3
C. E. 324, Testing Lab. ....	1 (3)	2
Chem. 333, Geology .....	3	3
E. E. 316, Elements .....	3	3
E. E. 322, Steam and Gas Engines ..	2 (3)	3

## WINTER QUARTER

	Hrs.	Cr.
C. E. 319, Applied Mechanics .....	4	4
C. E. 321, Framed Structures .....	3 (3)	4
C. E. 323, Highway Engr. ....	3	3
C. E. 325, Testing Lab. ....	1 (3)	2
E. E. 318, Elements .....	3	3
E. E. 437, Laboratory .....	(6)	2

## SPRING QUARTER

	Hrs.	Cr.
C. E. 330, Applied Mechanics .....	4	4
C. E. 322, Framed Structures .....	3 (3)	4
C. E. 329, Highway Engr. ....	3	3
C. E. 326, Testing Lab. ....	1 (3)	2
C. E. 323, Hydraulics .....	3	3
E. E. 439, Laboratory .....	(6)	2

## SENIOR YEAR

## FALL QUARTER

	Hrs.	Cr.
C. E. 418, Structural Design .....	1 (6)	3
C. E. 420, Reinforced Concrete ....	3	3
C. E. 424, Water Supply .....	3	3
Econ. 218, Principles .....	3	3
C. E. 426, Highway Lab. ....	(3)	1
Electives .....	4	4

## WINTER QUARTER

	Hrs.	Cr.
C. E. 419, Structural Design .....	1 (6)	2
C. E. 421, Concrete Structures .....	1 (6)	2
C. E. 425, Sanitary Engr. ....	3	3
Econ. 219, Principles .....	3	3
C. E. 427, Highway Lab. ....	(3)	1
Bact. 413, Sanitary Science .....	1 (6)	3
Electives .....	2	2

## SPRING QUARTER

	Hrs.	Cr.
C. E. 422, Concrete Structures .....	1 (6)	3
C. E. 423, Materials .....	3	3
Com. 443, Business Law .....	3	3
C. E. 428, Engr. Reports .....	(3)	1
Bact. 414, Sanitary Science .....	1 (6)	3
Electives .....	4	4

## ELECTRICAL ENGINEERING

## SOPHOMORE YEAR

## FALL QUARTER

	Hrs.	Cr.
Math. 210, Calculus .....	3	3
Physics 206, Advanced .....	3 (3)	4
Eng. 224, Adv. Composition .....	3	3
Chem. 225, Tech. Analysis .....	1 (3)	2
M. E. 207, Kinematics .....	2	2
M. E. 206, Descriptive Geom. ....	3	3
Shop 212, Patternmaking .....	(3)	1
Mil. Sci. 201 .....	(3)	1

## WINTER QUARTER

	Hrs.	Cr.
Math. 211, Calculus .....	3	3
Physics 207, Advanced .....	3 (3)	4
Eng. 225, Adv. Composition .....	3	3
Chem. 226, Tech. Analysis .....	1 (3)	2
M. E. 208, Kinematic Drawing .....	(6)	2
Pub. Spk. 130, Essentials .....	3	3
Shop 212, Patternmaking .....	(3)	1
Mil. Sci. 202 .....	(3)	1

## Oklahoma A. and M. College

## SPRING QUARTER

	Hrs.	Cr.
Math. 212, Calculus .....	3	3
Physics 208, Advanced .....	3 (3)	4
Eng. 226, Tech. Writing .....	3	3
Chem. 227, Tech. Analysis .....	1 (3)	2
C. E. 209, Surveying .....	1 (3)	3
*E. E. ....	2	2
Shop 322, Foundry .....	(3)	1
Mil. Sci. 203 .....	(3)	1

\*Not given until 1923-24.

## JUNIOR YEAR

## FALL QUARTER

	Hrs.	Cr.
Math. 310, Calculus .....	3	3
C. E. 318, Applied Mechanics .....	4	4
E. E. 310, D. C. Machinery .....	3	3
E. E. 311, Laboratory .....	(6)	2
E. E. 316, Elec. Heat Engines .....	3	3
M. E. 319, Laboratory .....	1 (3)	2
Shop 331, Machine Work .....	(3)	2

## WINTER QUARTER

	Hrs.	Cr.
Math. 311, Calculus .....	3	3
C. E. 319, Applied Mechanics .....	4	4
E. E. 312, D. C. Machinery .....	3	3
E. E. 313, Laboratory .....	(6)	2
M. E. 317, Elec. Heat Engines .....	3	3
M. E. 320, Laboratory .....	1 (3)	2
Shop 332, Machine Work .....	(3)	1

## SPRING QUARTER

	Hrs.	Cr.
C. E. 320, Applied Mechanics .....	4	4
C. E. 323, Hydraulics .....	3	3
E. E. 314, Alt. Currents .....	3	3
E. E. 315, Laboratory .....	(6)	2
E. E. 318, Thermodynamics .....	3	3
M. E. 321, Laboratory .....	1 (3)	2
Shop 313, Forge .....	(3)	1

## SENIOR YEAR

## FALL QUARTER

	Hrs.	Cr.
E. E. 416, A. C. Machinery .....	4	4
E. E. 417, Laboratory .....	(6)	2
E. E. 422, Design and Application .....	3	3
Physics 445, Elec. Measurements .....	1 (3)	2
Econ. 218, Principles .....	3	3
C. E. 324, Testing Materials .....	1 (3)	2

## WINTER QUARTER

	Hrs.	Cr.
E. E. 418, A. C. Machinery .....	4	4
E. E. 419, Laboratory .....	(6)	2
E. E. 424, Design and Appli. ....	3	3
E. E. 426, Transmission .....	3	3
Physics 446, Elec. Measurements .....	1 (3)	2
Econ. 219, Principles .....	3	3
C. E. 325, Testing Materials ....	1 (3)	2

## SPRING QUARTER

	Hrs.	Cr.
E. E. 420, A. C. Machinery .....	4	4
E. E. 421, Laboratory .....	(6)	2
E. E. 428, Transmission .....	3	3
Physics 447, Elec. Measurements .....	1 (3)	2
Com. 443, Business Law .....	3	3
C. E. 326, Testing Materials .....	(3)	2

## MECHANICAL ENGINEERING

## SOPHOMORE YEAR

## FALL QUARTER

	Hrs.	Cr.
Math. 210, Calculus .....	3	3
Physics 206, Advanced .....	3 (3)	4
Eng. 224, Composition .....	3	3
Chem. 225, Technical Analysis .....	1 (3)	2
M. E. 206, Descriptive Geom. ....	3	3
M. E. 207, Kinematics .....	2	2
Shop 212, Patternmaking .....	(3)	1
Mil. Sci. 201 .....	(3)	1

## WINTER QUARTER

	Hrs.	Cr.
Math. 211, Calculus .....	3	3
Physics 207, Advanced .....	3 (3)	4
Eng. 225, Composition .....	3	3
Chem. 226, Tech. Analysis .....	1 (5)	2
Pub. Spk. 130, Essentials .....	3	3
M. E. 208, Kinematic Draw. ....	(6)	2
Shop 213, Adv. Patternmaking ....	(3)	1
Mil. Sci. 202 .....	(3)	1

## SPRING QUARTER

	Hrs.	Cr.
Math. 212, Calculus .....	3	3
Physics 208, Advanced .....	3 (3)	4
Eng. 226, Technical .....	3	3
Chem. 227, Tech. Analysis .....	1 (3)	2
C. E. 209, Surveying .....	1 (3)	2
M. E. 209, Mechanisms .....	(6)	2
Shop 321, Foundry .....	(3)	1
Mil. Sci. 203 .....	(3)	1

JUNIOR YEAR

FALL QUARTER

	Hrs.	Cr.
Math. 310, Calculus .....	3	3
C. E. 318, Applied Mechanics ....	4	4
M. E. 316, Elec. Heat Engines ....	3	3
M. E. 319, Laboratory .....	1 (3)	2
M. E. 312, Mach. Design .....	3	3
M. E. 313, Mach. Design, Lab. ....	(6)	2
Shop 331, Machine Shop .....	(3)	1

WINTER QUARTER

	Hrs.	Cr.
Math. 311, Calculus .....	3	3
C. E. 319, Applied Mechanics ....	4	4
M. E. 317, Elec. Heat Engines ....	3	3
M. E. 320, Laboratory .....	1 (3)	2
M. E. 314, Mach. Design Lab. ....	(6)	2
Shop 322, Adv. Foundry .....	(3)	1
Shop 332, Machine Shop .....	(3)	1

SPRING QUARTER

	Hrs.	Cr.
C. E. Applied Mechanics .....	4	4
M. E. 318, Thermodynamics .....	3	3
M. E. 321, Laboratory .....	1 (3)	2
M. E. 315, Mach. Design Lab. ....	(6)	2
C. E. 323, Hydraulics .....	3	3
M. E. 324, Metallurgy .....	3	3
Shop 333, Machine Shop .....	(3)	1

SENIOR YEAR

FALL QUARTER

	Hrs.	Cr.
E. E. 434, Electrical Machinery .....	3	3
M. E. 426, Steam Engines .....	3	3
M. E. 429, Power Plant Equip. ....	3	3
M. E. 435, Ind. Org. and Mgt. ....	2	2
Econ. 218, Principles .....	3	3
C. E. 324, Testing Lab. ....	(3)	1
Shop 323, Oxyacetylene Welding ....	(3)	1

WINTER QUARTER

	Hrs.	Cr.
E. E. 436, Elec. Machinery .....	3	3
E. E. 311, Laboratory .....	(6)	2
M. E. 427, Steam Turbines .....	3	3
M. E. 430, Power Plant Design .....	(6)	2
M. E. 434, Hydraulic Machinery ....	3	3
M. E. 436, Ind. Org. and Mgt. ....	2	2
Econ. 219, Current Problems .....	3	3
C. E. 325, Testing Lab. ....	(3)	1

SPRING QUARTER

	Hrs.	Cr.
E. E. 438, Elec. Machinery .....	3	3
E. E. 313, Laboratory .....	(6)	2
M. E. 428, Int. Comb. Engines ....	3	3
M. E. 431, Power Plant Design ....	(6)	2
M. E. 432, Refrigeration .....	3	3
Com. 443, Business Law .....	3	3
M. E. 433, Adv. Laboratory .....	1 (3)	2
C. E. 326, Testing Lab. ....	(3)	1

TWO-YEAR COURSE IN ARCHITECTURE

FIRST YEAR

FALL QUARTER

	Hrs.	Cr.
Arch. 219, History .....	2	2
Arch. 225, Freehand Drawing .....	(6)	2
Arch. 118, Descriptive Geom. ....	2	2
Arch. 335, Design .....	(15)	5
Elective* .....	7	7

WINTER QUARTER

	Hrs.	Cr.
Arch. 220, History .....	2	2
Arch. 226, Freehand Drawing ....	(6)	2
Arch. 119, Descriptive Geom. ....	(6)	2
Arch. 336, Design .....	(15)	5
Elective* .....	7	7

SPRING QUARTER

	Hrs.	Cr.
Arch. 221, History .....	2	2
Arch. 227, Freehand Drawing .....	(6)	2
Arch. 120, Descriptive Geom. ....	(6)	2
Arch. 337, Design .....	(15)	5
Elective* .....	7	7

SECOND YEAR

FALL QUARTER

	Hrs.	Cr.
Arch. 327, History .....	2	2
Arch. 332, Freehand Drawing .....	(6)	2
Arch. 423, Design .....	(21)	7
Elective* .....	7	7

WINTER QUARTER

	Hrs.	Cr.
Arch. 328, History .....	2	2
Arch. 333, Freehand Drawing ....	(6)	2
Arch. 424, Design .....	(21)	7
Elective* .....	7	7

SPRING QUARTER

	Hrs.	Cr.
Arch. 329, History .....	2	2
Arch. 334, Freehand Drawing .....	(6)	2
Arch. 425, Design .....	(21)	7
Elective* .....	7	7

NOTE—Four hours each quarter of the required elective to be taken from subjects offered in Architecture or Architectural Engineering.

**DEPARTMENT OF ARCHITECTURE AND ARCHITECTURAL ENGINEERING.**

P. M. GEREN, *Professor*  
J. J. PATTERSON, *Assistant Professor.*  
P. A. WILBUR, *Instructor.*

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The courses offered by the department divide themselves into two groups, both being full professional courses extending over four years and leading to the degree of B. S. in Architecture and Architectural Engineering respectively. The schedule of these courses conform to the standard of the Associated Collegiate Schools of Architecture.

It is the purpose of the department to offer the necessary training in design, construction and the allied subjects, that eventually will fit the student for the practice of architecture, and also will enable him, upon graduation, to be of immediate value as a draftsman. With this end in view, the course of study combines with the strictly professional work the essentials of a liberal education, aiming to give the student as broad a foundation as possible for his future work. The number and scope of the subjects to be covered during the course make it necessary that the student start his architectural work at the beginning of the Freshman year.

The atelier system of instruction in design is followed; the problems being issued by the Beaux-Arts Institute of Design of New York. The completed problems periodically are sent to New York for judgment in competition with student work from many of the leading schools of Architecture in the United States, and credit thus earned is transferable to those schools without loss in value. Although the local standing of the student does not depend entirely upon the result of these judgments, it has been found that the wide field of competition stimulates greater interest than would problems of a local character.

During the summer vacation architectural students are expected to spend as large a part of their time as possible in the offices of practicing architects, and it has been found that those men who regularly follow this plan make the greatest advancement in college work.

The equipment of the Architectural lecture room includes Bausch & Lomb "Universal Balopticon" for the projections of slides and plates, and a carefully selected collection of lantern slides. The drawings, books and journals in the architectural library are freely

accessible to students during working hours, but must not be removed from the departmental reading room without special permission. The drafting rooms are provided with drawing tables of a type adopted as standard by the department. These have ample drawer capacity for students' work and tools, a top 39 by 72 inches in size for perspectives, and loose, inclined boards 32 by 44 inches for general use.

The studio for freehand drawing is well equipped with practical objects, still life models, simple plaster casts of architectural features and sculpture.

In addition to the full four year courses, a special course of two years' duration also is offered to qualify men who have had sufficient experience in the office of a practicing architect to enable them to carry on the required work. No entrance examination for this work will be required. Upon the completion of the required work a certificate of proficiency is given.

#### *SUBJECTS.*

118 DESCRIPTIVE GEOMETRY. Class 2 hours. Credit 2 hours. Fall Quarter.

Required of Freshmen in Architecture and Sophomores in Arch. Engr.

Prerequisite: Solid Geometry.

Fundamental problems involving points, lines and planes, intersection of planes and solids; shades and shadows; perspective.

(Not given to Arch. Engrs. 1922-23.)

119 DESCRIPTIVE GEOMETRY. Drafting 6 hours. Credit 2. Winter Quarter.

A continuation of Arch. 118.

(Not given to Arch. Engrs. 1922-23.)

120 DESCRIPTIVE GEOMETRY. Drafting 6 hours. Credit 2. Spring Quarter.

A continuation of Arch. 119.

(Not given to Arch. Engrs. 1922-23.)

121 FREEHAND DRAWING. Drafting 3 hours. Credit 1. Fall Quarter.

Required of Freshmen in Architecture and Arch. Engineering.

Elementary work in charcoal from casts; pencil sketching; indication.

122 FREEHAND DRAWING. Drafting 3 hours. Credit 1. Winter Quarter.

A continuation of Arch. 121.

123 FREEHAND DRAWING. Drafting 3 hours. Credit 1. Spring Quarter.

A continuation of Arch 122.

124 ELEMENTS OF ARCHITECTURE. Drafting 6 hours. Credit 2. Fall Quarter.

Required of Freshmen in Architecture.

The classic orders of Architecture and elementary studies in composition and drawing rendered in India ink.

- 125 ELEMENTS OF ARCHITECTURE. Drafting 6 hours. Credit 2  
Winter Quarter.  
A continuation of Arch. 124.
- 126 ELEMENTS OF ARCHITECTURE. Drafting 6 hours. Credit 2  
Spring Quarter.  
A continuation of Arch. 125.
- 127 ELEMENTS OF ARCHITECTURE. Drafting 3 hours. Credit 1.  
Fall Quarter.  
Required of Freshmen Arch. Engrs.  
Similar to Architecture 124, 125, 126, with less time required.
- 128 ELEMENTS OF ARCHITECTURE. Drafting 3 hours. Credit 1.  
Winter Quarter.  
A continuation of Arch. 127.
129. ELEMENTS OF ARCHITECTURE. Drafting 3 hours. Credit 1.  
Spring Quarter.  
A continuation of Arch. 128.
- 216 BUILDING CONSTRUCTION. Class 2 hours, drafting 3 hours. Credit 3. Fall Quarter.  
Required of Sophomore Arch. and Arch. Engrs.  
A study of the more important materials used in building construction with special reference to methods and details; plumbing and drainage. Class-work, drawing, reports and inspection of structures.
217. BUILDING CONSTRUCTION. Class 2 hours, drafting 3 hours. Credit 3. Winter Quarter.  
A continuation of Arch. 216.
- 218 BUILDING CONSTRUCTION. Class 2 hours. Credit 2. Spring Quarter.  
A continuation of Arch. 217.
- 219 HISTORY OF ARCHITECTURE. Class 2 hours. Credit 2. Fall Quarter.  
Prerequisite: General History.  
Required of Sophomore Arch. and Arch. Engrs.  
Rapid review of General History with particular attention to political and religious conditions affecting Architecture; History of Architecture, Painting and Sculpture from the earliest time to the Roman Period.
- 220 HISTORY OF ARCHITECTURE. Class 2 hours. Credit 2. Winter Quarter.  
A continuation of Arch. 219.
- 221 HISTORY OF ARCHITECTURE. Class 2 hours. Credit 2. Spring Quarter.  
A continuation of Architecture 220.
- 222 APPLIED MECHANICS. Class 3 hours. Credit 3. Fall Quarter.  
Prerequisite: Math.  
Required of Sophomore Arch.  
(For students who have not had calculus.)  
A study of those principles of mechanics and strength of materials

which apply to problems met with in building construction. Algebraic and graphical methods.

(This course is also required of Junior Architects 1922-23.)

- 223 APPLIED MECHANICS. Class 3 hours, drafting 3 hours. Credit 4. Winter Quarter.  
A continuation of Arch. 222.
- 224 APPLIED MECHANICS. Class 3 hours, drafting 3 hours. Credit 4. Spring Quarter.  
A continuation of Arch. 223.
- 225 FREEHAND DRAWING. Drafting 6 hours. Credit 2. Fall Quarter.  
Prerequisite: Arch. 123.  
Required of Sophomore Architects.  
A continuation of Arch. 123; Elementary water-color rendering.
- 226 FREEHAND DRAWING. Drafting 6 hours. Credit 2. Winter Quarter.  
A continuation of Arch. 225.
- 227 FREEHAND DRAWING. Drafting 6 hours. Credit 2. Spring Quarter.  
A continuation of Arch. 226.
- 228 ARCHITECTURAL DESIGN. Drafting 9 hours. Credit 3. Fall Quarter.  
Prerequisite: Arch. 126.  
Required of Sophomore Architects.  
Class B Analytique; Rendered problems for the study of the application of the orders of Architecture and their details at a large scale.  
6 Drafting hours scheduled.  
A continuation of Arch. 219.
- 229 ARCHITECTURAL DESIGN. Drafting 9 hours. Credit 3. Winter Quarter.  
A continuation of Arch. 228.  
(6 Drafting Hours Scheduled.)
- 230 ARCHITECTURAL DESIGN. Drafting 9 hours. Credit 3. Spring Quarter.  
A continuation of Arch. 229.  
(6 Drafting Hours Scheduled.)
- 231 FREEHAND DRAWING. Drafting 3 hours. Credit 1. Fall Quarter.  
Prerequisite: Arch. 123.  
Required of Sophomore Architectural Engineers.  
Similar to Arch. 225, 226, 227, with less time required.
- 232 FREEHAND DRAWING. Drafting 3 hours. Credit 1. Winter Quarter.  
A continuation of Arch. 231.
- 233 ARCHITECTURAL DESIGN. Drafting 6 hours. Credit 2. Fall Quarter.  
Prerequisite: Arch. 129.  
Required of Sophomore Architectural Engineers.  
Similar to Arch. 228, 229, 230, with less time required.
- 234 ARCHITECTURAL DESIGN. Drafting 6 hours. Credit 2. Winter Quarter.  
A continuation of Arch. 233.

- 235 ARCHITECTURAL DESIGN. Drafting 6 hours. Credit 2. Spring Quarter.  
A continuation of Arch. 234.
- 324 FRAMED STRUCTURES. Class 1 hour, drafting 6 hours. Credit 2. Fall Quarter.  
Prerequisite: Arch. 224.  
Required of Junior Arch.  
An application of the theory covered in Arch. 222, 223, 224, to frame structures of wood and steel.  
(This course not given 1922-23.)  
(Also required of Senior Arch. 1923-24.)
- 325 FRAMED STRUCTURES. Class 1 hour, drafting 6 hours. Credit 2. Winter Quarter.  
A continuation of Arch. 324.  
(See note Arch. 324.)
- 326 REINFORCED CONCRETE. Class 3 hours. Credit 3. Winter Quarter.  
Prerequisite: Arch. 224.  
Required of Junior Arch.  
A study of the theory of reinforced concrete design with special reference to its use in building construction.  
(This course not given 1922-23.)  
(Also required of Senior Arch. 1923-24.)
- 344 CONCRETE STRUCTURES. Class 1 hour, drafting 6 hours. Credit 2. Spring Quarter.  
Prerequisite: Arch. 326.  
Required of Junior Arch.  
An application of the theory covered in Arch. 326 to framed structures of reinforced concrete.  
(This course not given 1922-23.)  
(Also required of Senior Arch. 1923-24.)
- 327 HISTORY OF ARCHITECTURE. Class 2 hours. Credit 2. Fall Quarter.  
Prerequisite: Arch. 221.  
Required of Junior Arch. and Arch. Engrs.  
A continuation of Arch. 221, from the Roman Period to the present date.  
(Not given in 1922-23.)
- 328 HISTORY OF ARCHITECTURE. Class 2 hours. Credit 2. Winter Quarter.  
A continuation of Arch. 327.  
(Not given in 1922-23.)
- 329 HISTORY OF ARCHITECTURE. Class 2 hours. Credit 2. Spring Quarter.  
A continuation of Arch. 328.  
(Not given in 1922-23.)
- 330 WORKING DRAWINGS. Drafting 6 hours. Credit 2. Fall Quarter.  
Prerequisite: Arch. 218.  
Required of Junior Arch. and Arch. Engineers.  
Preparation for working drawings and typical details of simple frame and masonry structures.

- 331 WORKING DRAWINGS. Drafting 6 hours. Credit 2. Winter Quarter.  
A continuation of Arch. 330.
- 332 FREEHAND DRAWING. Drafting 6 hours. Credit 2. Fall Quarter.  
Prerequisite: Arch. 227.  
Required of Junior Arch.  
Advanced charcoal drawing; pencil and pen and ink rendering; advanced water-color.
- 333 FREEHAND DRAWING. Drafting 6 hours. Credit 2. Winter Quarter.  
A continuation of Arch. 332.
- 334 FREEHAND DRAWING. Drafting 6 hours. Credit 2. Spring Quarter.  
A continuation of Arch. 333.
- 335 ARCHITECTURAL DESIGN. Drafting 15 hours. Credit 5. Fall Quarter.  
Prerequisite: Arch 230.  
Required of Junior Arch.  
Class B. Project; Rendered problems in design for the study of simply arranged buildings, in plan, elevation and section.  
(9 drafting hours scheduled.)
- 336 ARCHITECTURAL DESIGN. Drafting 15 hours. Credit 5. Winter Quarter.  
A continuation of Arch. 335.  
(9 drafting hours scheduled.)
- 337 ARCHITECTURAL DESIGN. Drafting 15 hours. Credit 5. Spring Quarter.  
A continuation of Arch. 336.  
(9 drafting hours scheduled.)
- 338 FREEHAND DRAWING. Drafting 3 hours. Credit 1. Fall Quarter.  
Prerequisite: Arch. 232.  
Required of Junior Arch. and Engrs.  
Similar to Arch. 332, 333, 334, with less time required.
- 339 FREEHAND DRAWING. Drafting 3 hours. Credit 1. Winter Quarter.  
A continuation of Arch. 338.
- 340 FREEHAND DRAWING. Drafting 3 hours. Credit 1. Spring Quarter.  
A continuation of Arch. 339.
- 341 ARCHITECTURAL DESIGN. Drafting 9 hours. Credit 3. Fall Quarter.  
Prerequisite: Arch 235.  
Required of Junior Arch. Engrs.  
Similar to Arch. 335, 336, 337, with less time required.
- 342 ARCHITECTURAL DESIGN. Drafting 9 hours. Credit 3. Winter Quarter.  
A continuation of Arch. 341.
- 343 ARCHITECTURAL DESIGN. Drafting 9 hours. Credit 3. Spring Quarter.  
A continuation of Arch 342.

- 420 FREEHAND DRAWING. Drafting 6 hours. Credit 2. Fall Quarter.  
Prerequisite: Arch. 334.  
Required of Senior Arch.  
Theory of form and color; historic ornaments; sketching from life.
- 421 FREEHAND DRAWING. Drafting 6 hours. Credit 2. Winter Quarter.  
A continuation of Arch. 420.
- 422 FREEHAND DRAWING. Drafting 6 hours. Credit 2. Spring Quarter.  
A continuation of Arch. 421.
- 423 ARCHITECTURAL DESIGN. Drafting 21 hours. Credit 7. Fall Quarter.  
Prerequisite: Arch 337.  
Required of Senior Arch.  
Class A Project; Problems in advance design requiring an advanced knowledge of planning and the principles of decoration.  
(12 Drafting hours scheduled.)
- 424 ARCHITECTURAL DESIGN. Drafting 21 hours. Credit 7. Winter Quarter.  
A continuation of Arch. 423.  
(12 Drafting hours scheduled.)
- 425 ARCHITECTURAL DESIGN. Drafting 21 hours. Credit 7. Spring Quarter.  
A continuation of Arch. 424.  
(12 Drafting hours scheduled.)

GENERAL NOTE. Rendered sketches, measured drawings and problems in archeology are given from time to time throughout the courses: Arch. 225, 226, 227; Arch 233, 234, 235; Arch. 335, 336, 337; Arch. 341, 342, 343; Arch. 423, 424, 425.

GENERAL NOTE. Criticism hours only, are scheduled in Architectural Design. The drafting rooms are open at all times, for the convenience of students in making up the required time, not scheduled in the various courses in Architectural Design.

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## DEPARTMENT OF CHEMICAL ENGINEERING

\*HILTON IRA JONES, *Professor.*  
W. B. PARKS, *Professor.*  
ROBERT DuBOIS, *Associate Professor.*  
CHAS. L. NICKOLLS, *Assistant Professor.*  
STURGIS NELSON, *Storekeeper.*

This course in Chemical Engineering has been arranged to meet the needs of an increasing number of students who wish to prepare themselves for engineering work that depends wholly or in part on chemical and metallurgical processes. The purpose of the course is to provide the young engineer with a broad, well founded knowledge of both chemistry and mechanical engineering so that he may be prepared to take up the work of assisting in the design and erection of machinery used in such manufacturing plants as those indi-

\*On leave of absence.

ted. But it is the aim of the work also to develop in him the ability to see the bearing of proposition from the combined viewpoint of the chemist and the engineer, which is essential if one is to appreciate the fact that commercial success in manufacturing depends on the application of scientific principles.

In addition to the knowledge of the principles on which the design, construction and maintenance of a manufacturing plant rests, there must be control of the raw material used and the products turned out. No efficient control can be had except through chemical analyses; on this account the study of analytical chemistry is especially emphasized. The courses in chemistry and in mechanical engineering are so arranged that the work of the first two years is fundamental in character and furnishes a suitable foundation for one who would become either a chemist or an engineer; while that of the last two years, though it requires all the essential work for either, allows the student some choice of subjects, depending on the interest he has developed up to that time.

The equipment of both the chemical laboratory and the Department of Mechanical Engineering, described elsewhere in this catalog, is valuable for the work of this course.

Regular work is supplemented from time to time by the analyses of oil and similar products sent in from different parts of Oklahoma and elsewhere.

For the outline of the course, see "Courses in the School of Engineering."

For a description of the courses in chemistry, see the Department of Chemistry.

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## DEPARTMENT OF CIVIL ENGINEERING.

R. G. TYLER, *Professor.*  
J. H. MURDOUGH, *Assistant Professor.*

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The work of the Civil Engineering Department includes highway and railroad location and construction, municipal improvement, hydraulic and sanitary, bridge and structural engineering. The purpose of the instruction of this department is to give training sufficiently broad and comprehensive to fit a student to enter any line of Civil Engineering practice.

Highway construction is one of the most attractive features of engineering work at the present time and this factor is recognized in

planning the schedule in this course. The problems of water supply and sewage disposal are being brought to the attention of almost every community in Oklahoma. The training of city managers who have to deal with these and other municipal problems is identical with that of a well equipped civil engineer. Civil engineers have, in fact, usually been preferred for city managers.

This department is well supplied with the instruments needed for a thorough course in surveying, including surveys for highways, railroads, drainage and irrigation projects, and geodetic work.

In the course in bridge and structural design, careful study is made of the theory of stresses, and practice given in the actual designing of wood, steel and concrete structures.

The testing laboratory contains all of the machines usually found in a well equipped laboratory for the testing of structural materials. Opportunity is offered for laboratory study of cement, concrete, wood and steel. The machines for the testing of road materials conform to the standards of the United States Office of Public Roads.

Class instruction in hydraulics is supplemented by work in the hydraulic laboratory. Measurements of flow are made for weirs, nozzles, pipes and flumes. Tests of a Pelton wheel, of a centrifugal pump, and water meters, and field measurement by means of a current meter are also made. A thorough training in hydraulics is necessary to deal with problems of water supply, irrigation, and hydraulic development.

In addition to the work in mathematics, physics and chemistry required of all engineering students, certain courses adapted to the needs of civil engineers are required. Spherical trigonometry is given in the Sophomore year, and an opportunity to elect least squares in the Senior year. Geology is a required subject. It has a direct bearing upon the study of road and building materials. A course in sanitary biology is offered by the Department of Bacteriology and is of special importance for a clear understanding of sewage disposal and water purification. A course in steam and gas engineering and one in dynamo-electric machinery, given by the other departments, are especially adapted to the needs of civil engineering students.

**SUBJECTS**

**206 SURVEYING.** Class 2 hours. Credit 2.

Prerequisite: Math. 114.

Required of Sophomores in C. E., Fall Quarter.

A lecture and recitation course running concurrent with C. E. 210.

Care, use and adjustment of transit, level, planetable and compass. Exercises embracing the usual problems in elementary surveying, including traversing, profile leveling, topographical measurements and mapping.

Text: "Surveyor's Handbook," Taylor.

**207 RAILROAD CURVES.** Class 3 hours. Credit 3.

Prerequisite: C. E. 206 and Math. 114.

Required of Sophomores in C. E., Winter Quarter.

A lecture and recitation course concurrent with C. E. 211, teaching the accepted standard practice of the mathematics of Railroad Engineering as applied to Simple, Compound, and Reversed Curves, Vertical Curves, Turnouts and the A. R. E. A. spiral.

Text: "Railroad Curves and Earthworks," Allen.

**208 RAILROAD EARTHWORKS.** Class 3 hours. Credit 3.

Prerequisite: C. E. 207.

Required of Sophomores in C. E., Spring Quarter.

A course concurrent with C. E. 212, showing standard methods of computing earthwork, involving the construction and use of tables and diagrams.

Text: "Railroad Curves and Earthwork," Allen.

**209 ELEMENTARY SURVEYING.** Class 1 hour, fieldwork 3 hours. Credit 2.

Prerequisite: Math. 114.

Required of Sophomores in E. E., M. E. Spring Quarter.

A course adapted to the needs of those who require a working knowledge of the fundamental processes of surveying but who do not expect to complete a course of Civil Engineering.

**210 SURVEYING FIELDWORK.** Fieldwork 3 hours. Credit 1.

Prerequisite: Math. 114.

Required of Sophomores in C. E., Fall Quarter.

A course concurrent with C. E. 206, which shows the application of and gives practice in the methods discussed in C. E. 206.

**211 RAILROAD CURVES.** Fieldwork 3 hours. Credit 1.

Prerequisite: C. E. 210.

Required of Sophomores in C. E., Winter Quarter.

A course concurrent with C. E. 207, which illustrates the practical application of problems discussed in C. E. 207.

**212 RAILROAD EARTHWORK.** Fieldwork 3 hours. Credit 1.

Prerequisite: C. E. 211.

Required of Sophomores in C. E., Spring Quarter.

A course concurrent with C. E. 208 which illustrates the practical application of problems discussed in C. E. 208.

**213 FIELDWORK.** Fieldwork 3 hours. Credit 1.

Same as fieldwork for C. E. 209.

Required of Arch.

**318 APPLIED MECHANICS.** Statics. Class 4 hours. Credit 4.

Prerequisite: Math 212.

Required of all Juniors in Engineering, Fall Term.

A study of the principles of statics.

Text: "Applied Mechanics," Poorman.

- 319 APPLIED MECHANICS. Kinetics, Materials. Class 4 hours Credit 4.

Prerequisite: C. E. 318.

Required of all Juniors in Engineering, Winter Quarter.

This course includes a study of the principles of Kinetics and Dynamics and also begins the subject of Strength of Materials.

Texts: "Applied Mechanics," Poorman.

"Strength of Materials," Boyd.

- 320 APPLIED MECHANICS. Materials. Class 4 hours. Credit 4.

Prerequisite: C. E. 319.

Required of all Juniors in Engineering, Spring Quarter.

Embraces a study of the common beam theory, columns, torsion, internal stress and change of form.

Text: "Strength of Materials," Boyd.

- 321 FRAMED STRUCTURES. Class 3 hours, drawing room 3 hours. Credit 4.

Prerequisite: C. E. 318.

Required of Juniors in C. E. and A. E., Winter Quarter.

A course including an exhaustive study of curves of Moment and Shear, construction and use of Influence lines and Tables, stresses in Framed structures by analytical and graphical methods and of the standard methods of finding stresses due to moving load systems.

Text: "Structural Engineers Handbook," Ketchum.

- 322 FRAMED STRUCTURES. Class 3 hours, drawing 3 hours. Credit 4.

Prerequisite: C. E. 321.

Required of Juniors in C. E. and A. E., Spring Quarter.

A continuation and completion of C. E. 321.

- 323 HYDRAULICS. Class 3 hours. Credit 3.

Prerequisite: Math. 212, and C. E. 318, C. E. 319.

Required of Juniors in C. E., E. E., M. E., and Agricultural Engineering. Spring Quarter.

Fundamental principles of hydrostatics, hydrodynamics and their application to problems of engineering.

- 324 TESTING LABORATORY. Cement. Laboratory 3 hours. Credit 1.

Prerequisite: C. E. 318.

Required of all Juniors in C. E., M. E., E. E. and Agricultural Engineering. Fall Quarter.

Laboratory study of the properties of cement with much practice in report writing.

- 325 TESTING LABORATORY. Materials. Laboratory 3 hours. Credit 1.

Prerequisite: C. E. 318 and C. E. 319 concurrent.

Required of Junior Engineers, Winter Quarter.

In this course tests are made and reports written of the strengths of steel, iron and wood specimens.

- 326 TESTING LABORATORY. Hydraulics. Laboratory 3 hours. Credit 1.

Prerequisite: C. E. 318, C. E. 319 and C. E. 323 concurrent.

Required of Junior Engineers, Spring Quarter.

Laboratory study of hydrostatics and hydrodynamics.

- 327 HIGHWAY ENGINEERING. Class 3 hours. Credit 3.

Required of Juniors in C. E., Fall Quarter.

Methods of construction and maintenance of various types of roads and pavement with a detailed study of the materials used, of road building machinery and of the organization of road construction forces. Some study is

made of the economics of road building as regards the financing of road building projects.

228 HIGHWAY ENGINEERING. Class 3 hours. Credit 3.

Prerequisite: C. E. 327.

Required of Juniors in C. E., Winter Quarter.

A continuation of C. E. 327.

329 HIGHWAY ENGINEERING. Class 3 hours. Credit 3.

Prerequisite: C. E. 328.

Required of Juniors in C. E., Spring Quarter.

A continuation and completion of C. E. 327 and C. E. 328.

330 HIGHWAY SURVEYING. Fieldwork 3 hours. Credit 1.

Prerequisite: Math. 213 and C. E. 206.

Required of Juniors in C. E., Fall Quarter.

Geodetic Surveying, astronomical observations for the determination of latitude, longitude and time. Triangulation.

418 STRUCTURAL DESIGN. Girdles. Class 1 hour, drawing room 6 hours. Credit 3.

Prerequisite: C. E. 320 and C. E. 322.

Required of Seniors in C. E., Fall Quarter.

Complete Design and Detail of Plate Girder.

Text: "Structural Engineer's Handbook," Ketchum.

419 STRUCTURAL DESIGN. Trusses. Class 1 hour, drawing room 6 hours. Credit 3.

Prerequisite: C. E. 419.

Required of Seniors in C. E., Winter Quarter.

Design and detail of Trusses of wood and steel.

420 REINFORCED CONCRETE. Theory. Class 3 hours. Credit 3.

Prerequisite: C. E. 320.

Required of Seniors in C. E. and A. E., Fall Quarter.

Theory of reinforced concrete design.

Text: "Concrete Engineer's Handbook," Hool and Johnson.

421 CONCRETE STRUCTURES. Class 1 hour, drawing room 6 hours. Credit 3.

Prerequisite: C. E. 420.

Required of Seniors in C. E. and A. E., Winter Quarter.

Design of Masonry Dams, of Reinforced Concrete Bridges, of Abutments and retaining walls of a small ware-house.

422 CONCRETE STRUCTURES. Class 1 hour, drawing room 6 hours. Credit 3.

Prerequisite: C. E. 421.

Required of Seniors in C. E. and A. E., Spring Quarter.

A continuation and completion of C. E. 421.

423 MATERIALS OF CONSTRUCTION. Class 3 hours. Credit 3.

Prerequisite: C. E. 321.

Required of Seniors in C. E., Spring Quarter.

A lecture course on the properties and characteristics of the more common building materials.

424 WATER SUPPLY. Class 3 hours. Credit 3.

Prerequisite: C. E. 323.

Required of Seniors in C. E., Fall Quarter.

Source of water supply; methods of purification; design of water works

system. Engineering problems in the design of irrigation projects; capacity of canals; methods of irrigation; irrigation laws.

Text: "Public Water Supplies," Turneaure and Russell.

425 SANITARY ENGINEERING. Class 3 hours. Credit 3.

Prerequisite: C. E. 323 and C. E. 424.

Required of Seniors in C. E., Winter Quarter.

Designing and construction of sewerage systems; modern methods of disposal; methods of drainage.

Text: "American Sewerage Practice," Metcalf and Eddy.

426 HIGHWAY LABORATORY. Laboratory 3 hours. Credit 1.

Required of Seniors in C. E., Spring Quarter.

Prerequisite: C. E. 329.

Required of Seniors in C. E., Fall Quarter.

A laboratory study of the properties and characteristics of wood building materials using standard testing equipment.

427 HIGHWAY LABORATORY. Laboratory 3 hours. Credit 1.

Prerequisite: C. E. 426.

Required of Seniors in C. E., Winter Quarter.

A continuation and completion of C. E. 426.

428 ENGINEERING REPORTS. Laboratory 3 hours. Credit 1.

Prerequisite: Senior standing.

Required of Seniors in C. E., Spring Quarter.

A course involving original study of certain engineering projects with a report, either oral or written to be submitted as the result of this research.

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## DEPARTMENT OF ELECTRICAL ENGINEERING

W. J. MILLER, *Professor.*

C. V. BULLEN, *Instructor.*

The course in Electrical Engineering aims to give a thorough and comprehensive training in the fundamental principles of electricity and magnetism which experience has proven to be necessary for the proper development of the electrical engineering student. Special emphasis is placed upon the student's ability to reason logically, apply mathematics, and speak and write clear, concise English. In order to prepare the student for his professional courses the first two years are devoted to a study of mathematics, English, physics, chemistry, drawing and shop practice.

No sharp division can be made between the various branches of engineering. Therefore the student is given thorough courses in the fundamentals of chemical, civil and mechanical engineering in addition to the work in electrical engineering.

In the Electrical Engineering course the theory is taught in the class room and then applied in the laboratory by practical tests.

The dynamo laboratory, located on the first floor of the Engineering Building, is well equipped with electrical apparatus

There are twenty-one generators, motors, and synchronous converters of the various representative types and makes available for experiments. In addition to these dynamos the laboratory contains, transformers, starting devices, rectifiers, arc lamps, and watt-hour meters of various types. There is also a complete supply of instruments including meters, voltmeters, tachometers, and instrument transformers. No mechanics are connected up permanently. The students of each class are required to connect up the machines and adjust them for best operation before performing an experiment. At the close of a test all connections are removed.

The calibrating laboratory is equipped with a Leeds-Northrup potentiometer, standard shunts and standard Weston cells, a standard Weston voltmeter, a Weston indicating wattmeter, a General Electric rotating standard watt-hour meter, and the other necessary auxiliary apparatus for calibrating both laboratory and commercial instruments.

Modern telephone apparatus is provided for use in connection with the course in electric communication. Switch boards representative of every day practice enable the student to make a detailed study of commercial apparatus. A darkroom is equipped with a Leeds-Northrup photometer of the latest type, and is devoted exclusively to photometric work. Lamps and shades of many types may be studied in detail.

### *SUBJECTS*

206 DIRECT CURRENT CIRCUITS. Class 2 hours. Credit 2. Spring Quarter.

A course of recitations and problems devoted to the fundamental principles of the direct current electric and magnetic circuits, electrical units, energy and power. For Sophomore Electrical Engineering students.

Prerequisite: Physics 117; Math. 116.

310 DIRECT CURRENT MACHINERY. Class 3 hours. Credit 3. Fall Quarter.

A course of recitations and problems devoted to the study of the fundamental theory, operating characteristics and applications of direct current machinery. For Electrical Engineering students.

Prerequisite: Electrical Engineering 206.

311 ELECTRICAL ENGINEERING LABORATORY. Laboratory 6 hours, Credit 2. Fall Quarter.

A laboratory course to accompany Electrical Engineering 310.

Prerequisite: Registration in Electrical Engineering 310.

312 DIRECT CURRENT MACHINERY. Class 3 hours. Credit 3. Spring Quarter.

A continuation of 310.

Prerequisite: Electrical Engineering 310.

- 313 ELECTRICAL ENGINEERING LABORATORY. Laboratory 6 hours. Credit 2. Winter Quarter.

A laboratory course to accompany Electrical Engineering 311.  
Prerequisite: Electrical Engineering 312.

- 314 ALTERNATING CURRENTS. Class 3 hours. Credit 3. Spring Quarter.

A course of recitations and problems covering the theory and calculations involved in alternating current circuits. For Junior Electrical Engineering students.

Prerequisite: Electrical Engineering 312.

- 315 ELECTRICAL ENGINEERING LABORATORY. Laboratory 6 hours. Credit 2. Spring Quarter.

A laboratory course to accompany Electrical Engineering 312.  
Prerequisite: Electrical Engineering 314.

- 316 DIRECT CURRENT MACHINERY. Class 3 hours. Credit 3. Fall Quarter.

A course of recitations and problems dealing with the theory and operation, construction and application of direct current, generators, motors, distributing systems. For Junior Civil Engineering students.

Prerequisite: Physics 208; Math. 212.

- 318 ALTERNATING CURRENT MACHINERY. Class 3 hours. Credit 3. Winter Quarter.

A course of recitations and problems dealing with the theory of alternating current circuits, generators, transformers, motors, etc. For Junior Civil Engineering students.

Prerequisite: Electrical Engineering 316.

- 320 WIRING AND ILLUMINATION. Class 2 hours. Credit 2. Spring Quarter.

A course dealing with the practice and calculations in wiring for illumination and power, and the fundamental principles of illumination. For Junior Architects.

Prerequisite: Physics 117; Math. 116.

- 416 ALTERNATING CURRENT MACHINERY. Class 4 hours. Credit 4. Fall Quarter.

A course of recitations and problems on the construction, theory of operation, and characteristics of the principal types of alternating current machinery including transformers, alternators, motors and synchronous converters. For Senior Electrical Engineering students.

Prerequisite: Electrical Engineering 314.

- 417 ELECTRICAL ENGINEERING LABORATORY. Laboratory 6 hours. Credit 2. Fall Quarter.

A laboratory course to accompany Electrical Engineering 416.  
Prerequisite: Electrical Engineering 315.

- 418 ALTERNATING CURRENT MACHINERY. Class 4 hours. Credit 4. Winter Quarter.

Prerequisite: Electrical Engineering 416.

- 419 ELECTRICAL ENGINEERING LABORATORY. Laboratory 6 hours. Credit 2. Winter Quarter.

A laboratory course to accompany Electrical Engineering 418.

- 20 ALTERNATING CURRENT MACHINERY. Class 4 hours. Credit 4.  
A continuation of course 416.  
Prerequisite: Electrical Engineering 418.
- 21 ELECTRICAL ENGINEERING LABORATORY. Laboratory 6 hours. Credit 2. Spring Quarter.  
A laboratory course to accompany Electrical Engineering 420.  
Prerequisite: Electrical Engineering 419.
- 22 ELECTRIC DESIGN AND APPLICATION. Class 3 hours. Credit 3. Winter Quarter.  
A course devoted to a study of the design of electrical machinery and features to be considered in various applications. For Senior Electrical Engineering students.  
Prerequisite: Electrical Engineering 314.
- 24 ELECTRICAL DESIGN AND APPLICATION. Class 3 hours. Credit 3. Winter Quarter.  
A continuation of course 422.  
Prerequisite: Electrical Engineering 422.
- 26 POWER TRANSMISSION. Class 3 hours. Credit 3. Winter Quarter.  
A course of recitations and problems devoted to a study of the principles of transmission of electric power, including problems of the electrostatic and electromagnet circuits, electrical and mechanical calculations, and economic considerations. For Senior Electrical Engineering students.  
Prerequisite: Electrical Engineering 416.
- 28 POWER TRANSMISSION. Class 3 hours. Credit 3. Spring Quarter.  
Prerequisite: Electrical Engineering 426.
- 40 ELECTRICAL COMMUNICATION. Class 3 hours. Credit 3. Winter Quarter.  
A course devoted to the study of the theory of operation and construction of telephone equipment and systems, fundamental theory of radio communication, and problems of transmission by wire and wireless. Elective for Senior Electrical Engineering students.  
Prerequisite: Electrical Engineering 314; Math. 310-311.
- 41 ELECTRICAL ENGINEERING LABORATORY. Laboratory 6 hours. Credit 2. Winter Quarter.  
A laboratory course of direct current experiments for non-electrical Engineering students.  
Prerequisite: Electrical Engineering 316 or 434.
- 42 ELECTRIC RAILWAYS. Class 3 hours. Credit 3. Spring Quarter.  
A course including the study of the fundamental principles, construction, equipment and operation, involved in electric railway engineering. Elective for Senior Electrical Engineering students.  
Prerequisite: Electrical Engineering 314.
- 44 ELEMENTS OF ELECTRICAL ENGINEERING. Class 3 hours. Credit 3. Fall Quarter.  
A course of recitations and problems dealing with the fundamental theory of direct and alternating current circuits and machinery, including a study of the construction and application of the various machines. For Senior Architectural, Chemical and Mechanical Engineering students.  
Prerequisite: Physics 208; Math. 212.

- 436 ELEMENTS OF ELECTRICAL ENGINEERING. Class 3 hours. Credit 3. Winter Quarter.  
A continuation of course 434.  
Prerequisite: Electrical Engineering 434.
- 438 ELEMENTS OF ELECTRICAL ENGINEERING. Class 3 hours. Credit 3. Spring Quarter.  
A continuation of course 434.  
Prerequisite: Electrical Engineering 436.
- 439 ELECTRICAL ENGINEERING LABORATORY. Laboratory 6 hours. Credit 2. Spring Quarter.  
A laboratory course of alternating current experiments for non-electrical Engineering students.  
Prerequisite: Electrical Engineering 318 or 426.

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## DEPARTMENT OF MECHANICAL ENGINEERING

L. A. WILSON, *Professor.*  
E. C. BAKER, *Assistant Professor.*

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“Engineering is the science of controlling the forces and of utilizing the materials of nature for the benefit of man, and organizing and directing human activities in connection therewith.”

This admirable clause, quoted from the constitution of the Federated American Engineering Societies, defines in a clear and concise statement the scope of engineering science. The field is so broad and inclusive that nearly every activity of mankind is encompassed within its bounds. It includes many branches of applied science, each of which represents by itself a great field of activity.

Mechanical Engineering, which is the foundation of all industrial progress, is chief among the great branches of engineering. It has harnessed the forces of nature and converted them into heat and power for industrial use. It is the “bread of life” upon which the other branches of engineering subsist. No other branch of applied science is so essential to the progress and happiness of the human race; and as a producer of the necessities and luxuries of life mechanical engineering reigns supreme. Food, clothing, shelter, and in fact everything that contributes materially towards the physical comfort of humanity depends upon mechanical engineering genius for its economical and abundant production. Human life necessarily would be very primitive indeed without the modern conveniences that have been made possible by the natural laws of mechanics and thermodynamics to the development of machinery and heat engines for industrial purposes.

The extent to which all productive vocations depend upon mechanical engineering products cannot be too strongly emphasized. Although food is generally considered as a product of agriculture, its production, preparation and distribution could not be successfully accomplished without the aid of mechanical devices for cultivating the soil and harvesting the crops, machinery for grinding the grain and canning the vegetables, and transportation facilities for placing the final product within easy reach of the consumer. The manufacture of comfortable, serviceable clothing would be impossible without the automatic power-driven textile machinery that has been designed and built under the direction and supervision of mechanical engineers. Comfortable homes that are in evidence everywhere owe their existence to the modern methods of production in the mills, where machinery accomplishes in a minute what hours of manual labor could not do half as well. Bricks, lumber, nails, furniture, plumbing supplies, heating systems, and cooking appliances are all products of industries utilizing mechanical engineering principles and machinery.

So great is the scope of mechanical engineering that it offers unlimited possibilities to young men who desire to enter the profession of engineering. Mechanical engineering graduates constantly are in demand to fill positions of highest engineering responsibility in every branch of the profession, not only in the United States but also in many foreign countries where vast resources still are undeveloped. Trained mechanical engineers will find open to them such positions in the profession as automotive engineer, chief engineer, consulting engineer, contracting engineer, draftsman, efficiency engineer, erecting engineer, general manager, heating and purchasing engineer, refrigerating engineer, research engineer, sales engineer, superintendent, testing engineer, valuation engineer, works manager, and many other positions of equal magnitude and responsibility.

Moreover, an engineering education is considered by many as the best preliminary training for varied callings of trust and responsibility, not wholly of an engineering character but affiliated with engineering work. Mechanical engineering graduates, who have a liberal education and the personal characteristics essential for success in business affairs, can find excellent opportunities in other lines of work if they so prefer. Engineering service in the manufacturing industries also requires quite as much engineer-

ing as business ability, and mechanical engineers in increasing numbers are entering the field of industrial management.

One of the most important phases of the great work of the mechanical engineer is economical production. He has become a conspicuous factor in industrial development as an organizer, systematizer, and cost reducer. His knowledge of the mechanical principles and devices make him particularly well fitted for the practice of efficiency engineering.

Mechanical engineering graduates are in constant demand to fill Civil Service positions. The Patent Office requires the services of a large force of trained draftsmen and patent examiners. The Bureau of Standards employs engineers of the highest calibre to carry on its scientific investigations. Government research along aeronautical lines is being conducted by a large staff of prominent aeronautical engineers. Education usually weighs heavily in examinations for these positions, which practically eliminates all but college graduates from eligibility in most cases.

The shops and laboratories of the School of Engineering are fully equipped for the practical instruction included in the curriculum. New equipment is added from year to year in order to expand the shop and laboratory facilities and to introduce modern ideas and methods into the course of instruction. The laboratories of the Chemical, Civil and Electrical Engineering Departments, in which mechanical engineering students receive thorough instruction in the fundamentals of chemistry, civil engineering, and electricity, are described elsewhere in this Bulletin. The shops are fully equipped with the machinery and tools necessary for instruction in pattern making, foundry work, forging, and all kinds of machine work.

The equipment of the mechanical engineering laboratory includes instruments of the various kinds for measuring the flow of air, steam, gas and water; an assortment of temperature and pressure measuring instruments; steam calorimeters; fuel calorimeters for determining the calorific value of coal, gas and liquid fuels; oil-testing apparatus; recording meters; and many other scientific devices. A gas-fired steam boiler located in the laboratory is used for testing purposes only. A high-pressure steam line extending from the power plant supplies steam to the laboratory for experimental work with steam and for driving the steam engines and pumps. In addition to the steam machinery, the labor-

atory is equipped with a complete assortment of internal combustion engines, among which is one of the latest types of semi-Diesel crude-oil engines. The College power plant, consisting of several oil-fired boilers and steam driven engines and pumps, also is available for laboratory test. In addition to the regular laboratory work, inspection trips are made to study the equipment of the city power plant and the local ice-manufacturing plant.

The Mechanical Engineering Department presents herewith a curriculum which incorporates in a four-years course not only the best of the fundamental and specialized subjects of mechanical engineering, but also certain civil, chemical and electrical engineering subjects which aim to give the student a working knowledge of the fundamental principles involved in the practice of the other important branches of engineering to which the work of a mechanical engineer is so closely allied. The prospective student of engineering is invited to consider the advantages of the liberal training offered by this department and the countless opportunities that are open to mechanical engineering graduates.

### SUBJECTS

106 ENGINEERING DRAWING. Laboratory 6 hours. Credit 2. Fall quarter.

107 ENGINEERING DRAWING. Laboratory 6 hours. Credit 2 Winter Quarter.

Required of Freshmen in M. E., E. E., C. E. and Ch. E.

Description of the instruments necessary for ordinary line drawing. Special exercises selected for practice in using drawing instruments and the French curve. Description of special instruments and devices used in drafting. Free-hand lettering and choice of alphabets. Orthographic working drawings of simple machine parts, from pictorial views, with special emphasis given to dimensioning and order of inking. Drawing sectional views of simple machine parts from pictorial views. Drawing from description and specification. Tracing and blue-printing. Development of cylinder, cone, right cylinder, five-piece elbow, etc. Isometric, oblique and perspective drawing.

Text: "Engineering Drawing," French.

108 ELEMENTS OF DRAFTING. Laboratory 6 hours. Credit 2. Spring Quarter.

Prerequisite: M. E. 107.

Required of Freshmen in M. E., E. E., C. E. and Ch. E.

Drawing standard bolts, nuts, screws, keys, rivets and pipe. Standard forms for bills of material. Working drawings of machine parts with necessary notes from which a pattern could be made and the piece furnished in the shop. Freehand working sketches (orthographic) of machine parts giving all dimensions necessary for a standard working drawing. Elements of structural drafting. Tracing and blue-printing. Lectures on drafting room practice and commercial methods.

Text: "Engineering Drawing," French.

**206 DESCRIPTIVE GEOMETRY.** Class 3 hours. Credit 3. Fall Quarter.

Prerequisite: M. E. 108.

Required of Sophomores in M. E., E. E., C. E., and Ch. E.

Designation and notation of points on the planes of projection. Auxiliary planes of projection. Locating points and lines in planes. Measuring the true length of lines. Finding the traces of auxiliary planes. Locating the piercing points of lines. Fundamental problems relating to points and lines. Intersection and development of plane solids. Curved lines. Single curved surfaces. Warped surfaces. Double curved surfaces. Intersection and development of surfaces, etc. Execution of a large number of original exercises.

Text: "Practical Descriptive Geometry," Smith.

**207 KINEMATICS.** Class 2 hours. Credit 2. Fall Quarter.

Prerequisite: M. E. 108; Math. 112.

Required of Sophomores in M. E. and E. E.

A study of the motion of machine parts and of methods of transmitting motion by means of belts, ropes, chains, gears, cams and links. Parallel and straight-line mechanisms, instantaneous centers, gear trains, quick-return motions, and miscellaneous mechanisms. A large number of problems are solved involving belts, pulleys, gears, and velocities using the centro vector methods.

Text: "Elements of Mechanism," Schwamb, Merrill and James.

**208 KINEMATIC DRAWING.** Laboratory 6 hours. Credit 2. Winter Quarter.

Prerequisite: M. E. 207.

Required of Sophomores in M. E. and E. E.

Plotting the path of a point. Locating guide pulleys between non-parallel shafts and making working drawings of the following: logarithmic spiral gears, involute spur gear and pinion, involute rack and pinion, cycloidal gear, cone step pulleys, bevel gear, and plate and cylindrical cams for giving various kinds of motion.

Text: "Elements of Mechanism," Schwamb, Merrill and James.

**209 APPLIED MECHANISMS.** Laboratory 6 hours. Credit 2. Spring Quarter.

Prerequisite: M. E. 203.

Required of Sophomores in M. E. and E. E.

Graphical solution of relative linear velocities of various mechanisms by using the centro and victor methods. The location of all centros of a four- and five-link mechanism. Graphic construction for displacement and velocity diagrams for the steam engine, quick-return motions, and polar velocity diagrams for various rotary motion machines. The study of the different types of the steam engine indicator mechanisms and reducing motions. Simple valve gears.

Text: "Elements of Mechanism," Schwamb, Merrill and James.

**312 ELEMENTS OF MACHINE DESIGN.** Class 3 hours. Credit 3. Fall Quarter.

Prerequisite: M. E. 209. Concurrent with C. E. 318.

Required of Juniors in M. E.

The application of the laws of Mechanics and Kinematics to the design of machines and machine parts. Solution of problems in the design of general machine parts, including cylinders, plates, riveted joints, journals, bearings, shafts, gears, pulleys, friction wheels, couplings, clutches, connecting rods, piston rods, crank shafts, flywheels and springs.

Texts: "Elements of Machine Design," Nachman.

**313 MACHINE DESIGN.** Laboratory 6 hours. Credit 2. Fall Quarter.

314 MACHINE DESIGN. Laboratory 6 hours. Credit 2. Winter Quarter.  
ter.

315 MACHINE DESIGN. Laboratory 6 hours. Credit 2. Spring Quarter.

Prerequisite: Concurrent with M. E. 312.

Required of Juniors in M. E.

Proportioning and designing machinery and machine parts for durability and strength by analysis of stresses applied and the proper factors of safety. Investigation of machines similar to the ones to be designed. Machinery subjected to heavy and variable stresses: punches, shears, riveters, and cranes. Working drawings of all machines and machine parts will be required.

The Fall Quarter will be devoted to the design of jibs, fixtures and simple machine parts. Advanced design will be given during the Winter and Spring Quarters.

Text: "Elements of Machine Design," Nacham.

Reference book: "Mechanical Engineer's Handbook," Marx.

316 ELEMENTARY HEAT ENGINES. Class 3 hours. Credit 3. Fall Quarter.

317 ELEMENTARY HEAT ENGINES. Class 3 hours. Credit 3. Winter Quarter.

Required of Juniors in M. E. and E. E.

Theory and problems involving the fundamental principles of heat, elementary thermodynamics, properties of steam, calorimeters and mechanical mixtures, combustion of fuels, boilers and auxiliaries, steam engines, valve gears, governors, compound engines, condensers and air pumps, steam turbines, gas engines, and economy and heat engines.

Text: "Heat Engines," Allen and Bursley.

318 THERMODYNAMICS. Class 3 hours. Credit 3. Spring Quarter.

Prerequisite: M. E. 317.

Required of Juniors in M. E. and E. E.

Theory and problems involving the properties of perfect gases, expansion and compression of gases, cycles of heat engines using gas, properties of vapors, entropy, expansion and compression of vapors, cycles of heat engines using vapors, flow of fluids, and application of thermodynamics to compressed air and refrigerating machinery.

Text: "Elements of Engineering Thermodynamics," Moyer, Calderwood and Potter.

319 MECHANICAL ENGINEERING LABORATORY. Class 1 hour, laboratory 3 hours. Credit 2. Fall Quarter.

320 MECHANICAL ENGINEERING LABORATORY. Class 1 hour, laboratory 3 hours. Credit 2. Winter Quarter.

321 MECHANICAL ENGINEERING LABORATORY. Class 1 hour, laboratory 3 hours. Credit 2. Spring Quarter.

Prerequisite: Concurrent with M. E. 316, 317 and 318.

Required of Juniors in M. E. and E. E.

Study and calibration of instruments used in testing steam boilers, prime movers and machinery, including pressure and temperature measuring devices, plainimeters, steam calorimeters, engine indicators and reducing motions, and dynamometers; Measurement of the flow of fluids. Determination of the calorific value of fuels. Flue gas analysis. Boiler testing. Steam engine testing and valve setting. Gas- and oil-engine testing. Testing of ventilating fans. Testing of lubricants. Testing of pumps and turbines.

Reports conforming to the standard specifications adopted by the depart-

ments concerned are required. One credit per quarter is included for the writing of reports.

Text: "Power Plant Testing," Moyer.

**322 STEAM AND GAS ENGINEERING.** Class 3 hours. Credit 3. Fall Quarter.

Prerequisite: Phys. 208.

Required of Juniors in C. E. and Ch. E., and Seniors in A. E. and Arch.

Required of Juniors in Arch. 1922-23.

The study of the principles underlying the construction and operation of steam and gas power equipment, including heat and combustion of fuels, the condensing steam power plant, boilers and boiler auxiliaries, steam engines, steam turbines, engines and turbine auxiliaries, internal combustion engines, and internal combustion engine fuels.

Text: "Elements of Steam and Gas Power Engineering," Potter and Calderwood.

**324 METALLURGY.** Class 3 hours. Credit 3. Spring Quarter.

Prerequisite: Chem. 227, Shop 321 and Shop 311.

Required of Juniors in M. E.

Study of the methods of manufacturing and purifying iron and steel; mechanical treatment of steel; iron and steel founding; the solution theory of iron and steel; the constitution of steel and of cast iron; heat treatment of steel; alloy steels; electro-metallurgy and metallography of iron and steel.

Text: "The Metallurgy of Iron and Steel," Stoughton.

**426 STEAM ENGINES AND VALVE GEARS.** Class 3 hours. Credit 3. Fall Quarter.

Prerequisite: M. E. 318.

Required of Seniors in M. E.

Detailed study of the different types of steam turbines; factors that affect the economy of steam engines; valves and valve gears; governors; principles involved in the design of steam engines; lubrication systems.

References: Manufacturers' catalogs and blueprints.

**427 STEAM TURBINES.** Class 3 hours. Credit 3. Winter Quarter.

Prerequisite: M. E. 318.

Required of Seniors in M. E.

Detailed study of the different types of steam turbines; factors that affect the economy of steam turbines; nozzle and blade design; multi-staging; compounding; governing; lubrication.

References: Manufacturers' catalogs and blueprints.

**428 INTERNAL COMBUSTION ENGINES.** Class 3 hours. Credit 3. Spring Quarter.

Prerequisite: M. E. 318.

Required of Seniors in M. E.

Thermodynamics of internal combustion engines; the Otto Cycle and the Diesel Cycle; properties of gaseous and liquid fuels; fuel-mixing devices, carburetors and vaporizers; modern internal combustion engines, including large gas engines, high speed automobile and aeronautical engines, low pressure oil engines and Diesel engines; ignition systems, governing, valves and valve gear, design data, performance data, gas engine operation; gas producers and the manufacture of producer gas.

Text: "Gas Engines and Producers," Marks.

**429 POWER PLANT EQUIPMENT.** Class 3 hours. Credit 3. Fall Quarter.

Prerequisite: M. E. 318.

Required of Seniors in M. E. and E. E.

Detailed study of the different types of power boilers; application of the

principles of combustion to the design and proportioning of boiler furnaces and the arrangement of tubes and baffles; mechanical stokers; superheaters; economizers; feed-water heaters; chimneys and mechanical draft equipment; coal and ash handling machinery; condensers; pumps; steam piping; feed-water purification; A. S. M. E. boiler rules; boiler room inspection and repairs; choice and lay-out of plant equipment.

Text: "Mechanical Equipment of Buildings," (Vol. II), Harding and Willard.

References: Manufacturers' catalogs and blueprints.

430 STEAM POWER PLANT DESIGN. Laboratory 6 hours. Credit 2. Winter Quarter.

431 STEAM POWER PLANT DESIGN. Laboratory 6 hours. Credit 2. Spring Quarter.

Prerequisite: M. E. 429.

Required of Seniors in M. E. and E. E.

The Winter Quarter will be devoted to the design of a small power plant equipped with reciprocating engines and adapted to furnish light and power for a small city, an industrial plant, or a large office building.

The Spring Quarter will be devoted to the design of a large central station steam-electric power plant based on the latest developments in power plant practice.

Proper consideration will be given to the factors affecting the choice of location of the plant, choice of types and sizes of units, spare units, systems of heat-balance control, provisions for future expansion, design of the building and foundations, arrangements of equipment, and cost analysis.

Text: "Mechanical Equipment of Buildings" (Vol. II), Harding and Willard.

References: "Engineering of Power Plants," Fernald and Orrok; "Mechanical Engineer's Handbook," technical periodicals; manufacturers' catalogs and blueprints.

432 REFRIGERATION. Class 3 hours. Credit 3. Spring Quarter.

Prerequisite: M. E. 318.

Required of Seniors in M. E.

Theory and problems involving the principles of ice manufacture and cold storage. Unit of refrigeration; rating of refrigerating machines; refrigerating load; heat transmission and construction of cold-storage walls and freezing tanks; small refrigerators; heat transmission of piping used in refrigeration practice; methods of producing artificial refrigeration including cold air machines, compression machines, vacuum machines and absorption machines; thermal properties of ammonia vapor and of concentrated solutions of ammonia and water; ammonia condensers; brine circulating systems; ice-manufacturing plants; practical pointers on the care and operation of refrigerating machinery. The course will be supplemented by inspection trips to near-by plants.

Text: "Mechanical Equipment of Buildings," (Vol. II), Harding and Willard.

433 ADVANCED MECHANICAL LABORATORY. Class 1 hour, laboratory 3 hours. Credit 2. Spring Quarter.

Prerequisite: M. E. 321.

Required of Seniors in M. E.

Study of the methods of conducting commercial tests of large boilers, steam engines, steam turbines, hydraulic turbines, pumps, internal combustion engines, refrigerating machinery and power plants. Participation in actual commercial tests if suitable arrangements can be made.

Reports conforming to the standard specifications adopted by the department are required. One credit is included for the writing of reports.

Text: "Power Test Code," published by the American Society of Mechanical Engineers.

434 HYDRAULIC MACHINERY. Class 3 hours. Credit 3. Winter Quarter

Prerequisite: C. E. 323.

Required of Seniors in M. E.

Types of hydraulic turbines and settings; water power of streams; theory of the tangential water wheel and the reaction turbine; general laws and constants; turbine characteristics; selection of types of turbine; cost of turbine and water power; principles and design of tangential water wheels and reaction turbines; centrifugal pumps. The theory is supplemented by practical problems.

Text: "Hydraulic Turbines," Daugherty.

435 INDUSTRIAL ORGANIZATION AND MANAGEMENT. Class 2 hours. Credit 2. Fall Quarter.

436 INDUSTRIAL ORGANIZATION AND MANAGEMENT. Class 2 hours. Credit 2. Winter Quarter.

Prerequisite: Shop 333.

Required of Seniors in M. E.

This course covers the consideration of the entire works, including shops, departments, and offices as follows: general theory of industrial location; theory of plant location; reasons for growth and business specialization; organization and administration; cost of production and methods of modern manufacture; the science of buying and selling; the effects of labor unions on production; employment of labor; keeping cost records; plant lighting, heating and ventilating; and the scientific management of various factories and industrial plants. The preparation and reading of papers on subjects assigned by the instructor will be required.

437 HEATING AND VENTILATION. Class 3 hours. Credit 3. Winter Quarter.

Prerequisite: M. E. 322 or M. E. 317.

Required of Seniors in A. E. and Arch.

Theory and design of the various systems for the heating and ventilation of buildings; hot air, hot water, steam, and the plenum and vacuum systems; central station and district heating.

Text: "Handbook for Heating and Ventilating Engineers," Hoffman.

## DEPARTMENT OF SHOP PRACTICE

DeWITT HUNT, *Superintendent.*

L. K. COVELLE, *Assistant.*

E. D. SODERSTROM, *Assistant.*

F. R. BRADLEY, *Assistant.*

The work in the shops is intended to serve (1) Students of engineering who require training in the methods of modern shop processes, and the principles underlying efficient production; (2) students of other divisions of the College who need a less extensive training in shop work, and (3) those who expect to become teachers of manual training and vocational subjects.

The most remarkable achievement in shop practice in the last decade has been the reduction of each tool process to its simplest and most usable form. All of the courses in shop practice are organized for the purpose of presenting the recognized elemental tool processes, and are intended to cover nearly all the general processes in each division. Lectures are given each week in every course outlining some important phase of the work to be covered.

*SUBJECTS*

**118 FORM SHOPWORK.** Shop practice 3 hours. Credit 1.

Required of all Freshman Agricultural Students.

During the entire year of this Form Shopwork course the time will be divided equally between woodwork and metalwork. The first term of woodwork will consist entirely of bench woodwork. The first term of forging will include care of the fire, drawing out, eye-bending, upsetting and pinching. Such things as saw horses, fly traps, miter boxes, gates, lap links, swing hooks, gate hooks, hay hooks and clevises will be made.

Text: For Woodwork: "Notes for Beginning Hand Woodwork," Hunt.

For Forging: "Elementary Forging Notes," Soderstrom.

**119 FORM SHOPWORK.** Shop practice 3 hours. Credit 1.

Required of all Freshman Agricultural students.

The woodwork of this term's work will consist of rafter cutting and saw filing. In forming faggot welds, lap welds, chain links, rings and eye-holes will be made and uses of the taps and will be taught. The proper methods of cutting braces and common hip, valley, jack and cripple rafters will be taught by having students actually cut them. Each student will be required to file a saw before grade is given. In forging a section of a chain with hook and ring will be required of each student. Also, a ring bolt for a hitching post will be required.

Text: For Woodwork: "Carpentry," Griffith.

For Forging: Same as for shop.

**120 FORM SHOPWORK.** Shop practice 3 hours. Credit 1.

Required of all Freshmen Agricultural students.

The entire time devoted to woodwork will be spent working on a real carpentry job. During the past several years the form shopwork classes have built the grandstand for the athletic field, the garages and a six room remodeled house, thus giving actual carpentry experience on a real job. In forging, drilling, riveting and heat treatment of carbon steel will be taught in the production of tongs, S wrenches, punches, cold chisels and knives.

**121 HAND WOODWORK.** Shop practice 3 hours. Credit 1.

For Manual Training Teachers.

A complete study of hand woodwork through fastening with nails and screws will be made.

Text: "Notes for Beginning Hand Woodwork," Hunt.

**122 HAND WOODWORK.** Shop practice 3 hours. Credit 1.

Prerequisite: Shop 111.

For Manual Training Teachers.

Making and using dado and half lap joint construction in models typical of this construction forms the basis of this course.

Text: "Esentials of Woodwork," Griffith.

**123 HAND WOODWORK.** Shop practice 3 hours. Credit 1.

Prerequisite: Shop 112.

For Manual Training Teachers.

The material and tenon joint with its use in furniture construction is covered in this course.

Text: "Notes for Advanced Hand Woodwork," Hunt.

**131 WOOD TURNING.** Shop practice 3 hours. Credit 1.

For Manual Training Teachers.

This is a beginning course in woodturning embracing the making up of five exercises in a spindle trimming project and a force plate problem.

Text: "Wood Turning," Milton and Workless.

**132 ADVANCED WOOD TURNING.** Shop practice 3 hours. Credit 1.

Prerequisite: Shop 121 or 211.

For Manual Training Teachers.

This is a continuation of the beginning turning course and such problems as lamps, pedestals and bowls will be made.

**141 MECHANICAL DRAWING.** Practice 3 hours. Credit 1.

For Manual Training Teachers.

The technique of pencil drawing, lettering, freehand working sketches and the basic principles of mechanical drawing are covered in this term.

Text: "Mechanical Drawing for High Schools," French and Svenson.

**142 MECHANICAL DRAWING.** Practice 3 hours. Credit 1.

Prerequisite: Shop 131.

For Manual Training Teachers.

This term's work consists of inking, dimensioning and tracing drawings, and making blueprints.

Text: Same as for Shop 131.

**143 MECHANICAL DRAWING.** Practice 3 hours. Credit 1.

Prerequisite: Shop 142.

For Manual Training Teachers.

The greater portion of the work of this term will be thread drawing. Machine parts, topped, holes and sectional views will be explained and drawn.

Text: Same as for Shop 142.

**211 WOODWORK.** Shop practice 3 hours. Credit 1.

Required of Sophomore M. E. and E. E. students.

Uses and care of woodwork tools and elementary lathe work will constitute the first and major portion of this course. Patternmaking principles will be touched.

Text: "Notes for Beginning Hand Woodwork," Hunt.

**212 PATTERN MAKING.** Shop practice 3 hours. Credit 1.

Prerequisite: Shop 211.

Required of Sophomore M. E. and E. E. students.

A thorough course in patternmaking covered by lectures and work on pattern making. The foundry methods governing patternmaking principles are demonstrated by trips to the foundry.

Text: "Pattern Making," Sampson and McCuche.

**213 ADVANCED PATTERN MAKING.** Shop practice 3 hours. Credit 1.

Prerequisite: Shop 212.

Required of Sophomore M. E. students.

This course is a continuation of Shop 212.

- 221 MACHINE WOODWORK. Practice 3 hours. Credit 1.  
Prerequisite: Shop 123 or its equivalent.  
For Manual Training Teachers.  
Machine uses in furniture making are taught by using the factory method of making some pieces of furniture.  
Text: "Woodwork for Secondary Schools," Griffith.
- 222 MACHINE WOODWORK. Practice 3 hours. Credit 1.  
Prerequisite: Shop 221.  
For Manual Training Teachers.  
A continuation of Shop 221.
- 223 MACHINE WOODWORK. Practice 3 hours. Credit 1.  
A continuation of Shop 222.
- 231 CARE OF SHOP EQUIPMENT. Class 1 hour, practice 2 hours. Credit 1½.  
For Manual Training Teachers.  
Lectures and practice involved in the care of shop tools, saw-filing, sharpening of edge tools, care of machines and installation of shop equipment will be given in this course.
- 232 WOOD FINISHING. Class 1 hour, practice 2 hours. Credit 1½.  
For Manual Training Teachers.  
Standard finishes for several different woods will be studied and worked out on panels.  
Text: "Problems of the Finishing Room," Schmidt.
- 233 DESIGN. Class 1 hour, practice 2 hours. Credit 1½.  
Prerequisite: Shop 143.  
For Manual Training Teachers.  
This is primarily a course in drawing in which the student designs pieces that may be made in the shop. The designing is done from the standpoint of adapting the model to shop classes. A tracing is kept of each piece designed and an exchange of shop drawings thus established. Students may make blue-prints from any of these tracings and thus go out with a well established, graded set of models.  
Text: "Furniture Design," Crawshaw.
- 311 FORGE. Shop practice 3 hours. Credit 1.  
Required of Sophomores in M. E. and E. E.  
The student is required to make a graded set of forgings and the various types of welds. Tool-dressing, hardening and tempering, casehardening, and the heat treatment of carbon and high-speed tool steels is performed by the student. Lectures are given on the study of wrought metals and on heat-treatment.  
Text: "Plain and Ornamental Forging," Schwartzkopf.
- 312 ADVANCED FORGING. Shop practice 3 hours. Credit 1.  
Prerequisite: Forging.  
For Manual Training Teachers. Elective in Engineering courses.  
An advanced course in forging, adapting the work to the needs of a high school forge shop where a large proportion of interest in the work is necessary.  
Text: "Plain and Ornamental Forging," Schwartzkopf.
- 313 ADVANCED FORGING. Shop practice 3 hours. Credit 1.  
Prerequisite: Shop 212.  
For Manual Training Teachers.  
A continuation of Shop 212.

- 321 FOUNDRY. Shop practice 3 hours. Credit 1.

Required of Sophomores in M. E., fall quarter.

The student is required to make a graded set of molds of patterns which, for the most part, are to be used on machines or apparatus that is to be built in the shops. Preparation and charging of cupola, pouring off heats and mixing and baking cores. Lectures are given on modern foundry practice.

Text: "Pattern Making." Sampson and McCuche.

- 322 ADVANCED FOUNDRY. Shop practice 3 hours. Credit 1.

Prerequisite: Shop 321.

Elective for Manual Training Teachers or Engineering students.

A continuation of Shop 321.

Aluminum and brass casting are made, complicated patterns and moulding devices are used.

- 323 OXY-ACETYLENE WELDING. Shop practice 3 hours. Credit 1.

Using Oxy-Acetylene torch for welding and cutting. Burning carbon. preparation of broken parts for welding. Preheating before welding.

- 331 MACHINE SHOP. Practice 3 hours. Credit 1.

For Juniors in M. E. and E. E.

The student in these courses is required to make a graded set of machine parts. As far as possible all exercises are selected from designs of machines that are being built in the shops. Lectures are given each work period.

Text: "Machine Shop Practice," Kaup.

- 332 MACHINE SHOP. Practice 3 hours. Credit 1.

A continuation of Shop 321.

- 333 MACHINE SHOP. Practice 3 hours. Credit 1.

A continuation of Shop 322.

- 341 ADVANCED FORM SHOPWORK. Practice 3 hours. Credit 1.

Prerequisite: Form Shopwork.

For Smith-Hughes Teachers of Agriculture.

This is a course of advanced hand woodwork and a number of form wood-work problems will be worked out. Such projects as single-trees, hammer handles, chicken feeders, incubators, etc., will be made under conditions typical of the form workshop.

Text: "Form Woodwork." Rachl.

- 342 ADVANCED FORM SHOPWORK. Practice 3 hours. Credit 1.

Prerequisite: Form Shopwork.

For Smith-Hughes Teachers of Agriculture.

This will be a combination course of woodwork and cold metal work. The making of a wagon bed will be typical of the work done in this term.

Text: "Form Woodwork." Rachl.

- 343 ADVANCED FORM SHOPWORK. Practice 3 hours. Credit 1.

Prerequisite: Form Shopwork.

For Smith-Hughes Teachers.

In this term two weeks will be devoted to each of the following subjects: —Concrete Form Building, Concrete Work, Leather Work, Belt Lacing, Babbiting and soldering.

Text: "Leather Work," Rachl.

"Concrete Work," Baxter.

"School Shop Installation." Greene.

# THE SCHOOL OF HOME ECONOMICS



## FACULTY

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- JAMES BURNETTE ESKRIDGE, A. M., Ph. D.; *President of the College.*  
ELLA NORA MILLER, B. S., M. S.; *Dean of the School of Home Economics, Professor of Domestic Science.*  
NORA AMARYLLIS TALBOT, B. S., M. A.; *Professor of Domestic Art.*  
LOUISE PRITCHETT, B. S.; *Associate Professor of Domestic Science.*  
ETHEL DAVIS, B. S.; *Associate Professor in Domestic Art.*  
MARY MARIE BAIRD, B. S., M. A.; *Assistant Professor of Domestic Science, Supervisor of Home Builders' Cottage.*  
BIRDIE VORHIES, Ph. B.; *Assistant Professor of Domestic Science.*  
ISABELLE MILLIGAN STORY, B. S.; *Instructor in Domestic Art.*  
MARGARET STEVENS STERN, B. S.; *Instructor in Domestic Science, Supervisor of Smith-Hughes Teacher-Training.*
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- HERBERT PATTERSON, A. B., A. M., Ph. D.; *Dean of the School of Education, Professor of Education.*  
HENRY FULLER HOLTZCLAW, A. B., Ph. D.; *Dean of the School of Commerce and Marketing, Professor of Economics.*  
BOHUMIL MAKOVSKY, *Director of Music.*  
\*HILTON IRA JONES, A. B., A. M., Ph. D.; *Professor of Chemistry.*  
AVERY LUVERE CARLSON, B. A., M. A., J. D.; *Professor of Business Administration.*  
ALBERT SAMUEL HIATT, A. B.; *Professor of History.*  
JOHN HOFER CLOUD, A. B., A. M., Ph. D.; *Professor of Physics.*  
WILLIAM BENJAMIN PARKS, A. M., S. M., Ph. D.; *Professor of Chemistry.*  
WILLIAM PTOLEMY POWELL, B. A., M. A.; *Professor of English.*  
SOLOMON LUTHER REED, A. B., A. M., Ph. D.; *Professor of Education.*  
RUTH DuBOIS, Diploma, A. B.; *Professor of Physical Education for Women.*  
ROBERT OSCAR WHITENTON, A. B., M. S.; *Associate Professor of Zoology.*  
CLARENCE HAMILTON McELROY, B. S., D. V. M.; *Associate Professor of Bacteriology.*  
ROBERT DuBOIS, A. B., M. S.; *Associate Professor of Chemistry.*  
GRACE ALICE MOUNTCASTLE, Ph. B.; *Associate Professor of English.*  
AGNES BERRIGAN, B. A., M. A.; *Associate Professor of English.*  
FRED McCARREL, B. S., M. S.; *Associate Professor of Education.*  
JAMES HENRY CALDWELL, *Assistant Professor of History.*  
HARRY WILLIAM ORR, D. V. M.; *Assistant Professor of Physiology.*  
EMELIA MARIE SKARRA, Diploma; *Assistant Professor of Physical Education for Women.*  
JANE PORTER SLOSS, Graduate; *Instructor in Piano.*  
DAISY DELL McCOOL, Diploma; *Instructor in Art.*  
FRANK HLADKY, Graduate; *Instructor in Violin.*  
LEONA SIEGLINGER, B. S.; *Instructor in Physics.*  
HARRIET RUBY ENSWORTH, Ph. B.; *Instructor in English.*

\*On leave of absence.

## THE SCHOOL OF HOME ECONOMICS

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The School of Home Economics offers several courses each leading to the degree of Bachelor of Science. In the Bachelor of Science course four years of college work is required. A special two years course for normal graduates is given, leading to the degree of Bachelor of Science in any of the courses offered.

Non-collegiate vocational courses, short unit courses for home makers and special summer courses for teachers also are offered.

The professional course for Smith-Hughes teacher-training is planned in accordance with the provisions of the Smith-Hughes Act, and is approved by the Federal and State Boards of Education. The following is taken from the 1920-21 Bulletin of State Board of Vocational Education and refers to the qualification of teachers of Home Economics in high schools receiving Smith-Hughes aid:

(1) Practical Experience. The teacher must have had at least two years' actual experience with the practical problems of Home Economics and her college course must have included a course in supervised home management under home conditions.

(2) Training in Home Economics. The teacher of vocational Home Economics must have graduated from a four-year Home Economics course in an approved college or possess the qualifications equivalent to graduation.

(3) Professional Training. The teacher of an all-day school must have spent during her college course, at least ten per cent of her college hours in professional training which should include special methods in Home Economics and practice-teaching in Home Economics.

Special courses offered in Domestic Science are as follows:

Work leading toward special positions in hospital work, nursing and dietetics, work in lunch room, cafeteria and tea rooms, Special demands have been made upon graduates from this College in the recent years and these courses have been in good demand by the business public.

Nutrition and dietetics in rural schools, public schools, and high schools. Special emphasis has been placed upon community work, child welfare, infant feeding, and home nursing. The School of Home Economics has a special, well equipped home builders' cottage, which is used in connection with teaching these subjects. An infant child is secured from an orphan home in Oklahoma and the girls make a close study of the feeding, care, management, and sewing duties of the child and the house.

The course for extension workers is especially well suited to these Southern States, as the extension field under the Smith-Lever Act is very well developed here, and there is a great demand for young women qualified to fill both city and country positions, and also to assume work as field specialists.

The Domestic Art Courses offer work leading to the teaching of Domestic Art in high schools and colleges. Special attention is given to work in textiles, and well equipped laboratories are used for this purpose. Complete courses are given in all lines, in cutting, fitting, garment construction, costume planning, designing, and art. These courses can be broken up so as to give the student special training in sewing, or in the field of design. Students make their own choice.

The non-collegiate course is arranged for girls whose training does not qualify them to enter the degree courses listed above. The purpose is to give in a short time the most helpful training possible for these young women.

During the summer session special courses are offered which will allow teachers to receive credit on their certificates for these subjects, and which also will help them in planning courses of study, in the selection of equipment, and in the arranging of a laboratory for their schools. These courses also will include a discussion of the current problems arising in the field of Home Economics. For detailed announcement, see Summer School Bulletin.

The training in all these courses is both general and specific. Much emphasis is placed on the scientific work as a foundation for the specific courses in Home Economics as scientific training is fundamental in the successful administration of the home. Much attention also is paid to English, History, Languages, and other general courses so that students may possess a well rounded education. In most of the degree courses in the School of Home Economics the time is quite equally divided between general, scientific and technical work.

The School of Home Economics recently has moved into the new building erected especially for the division, well equipped with modern facilities for conducting the work of all departments.

#### *SPECIAL CERTIFICATE IN HOME ECONOMICS*

Home Economic students finishing the first two years in the regular courses may be granted a special five-year teaching certifi-

cate, which will enable them to secure special positions in Home Economics teaching.

### CORRESPONDENCE COURSE IN HOME ECONOMICS

Home Economics courses are offered in cooking and sewing through the School of Correspondence-Study. More courses will be added through correspondence-study as the field of demand for such subjects broadens.

### COURSES IN THE SCHOOL OF HOME ECONOMICS

The following outline of study represents the required and elective work in the School of Home Economics. The courses are numbered, beginning with 100 in the Freshman year, 200 in the Sophomore year, 300 in the Junior year and 400 in the Senior year. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

For the Bachelor of Science degree, 204 quarter credit hours are required in General Home Economics; 220 quarter credit hours in Smith-Hughes Teacher Training.

Normal school graduates coming from any teachers college in the state of Oklahoma are privileged to enter any course given in the School of Home Economics. Most of our normal graduates have complete junior standing, unless they come lacking some of the fundamental sciences, and in such cases we find that as a rule it is Chemistry, which they take while finishing these courses.

In the outline below, figures without parenthesis indicate hours of class work, in parenthesis hours of laboratory work.

#### FRESHMAN YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Eng. 130, College .....	3	3	Eng. 131, College .....	3	3
Chem. 106, Inorganic .....	3 (3)	4	Chem. 107, Inorganic .....	3 (3)	4
H. E. 115, Foods .....	(3)	1	H. E. 116, Foods .....	(6)	2
H. E. 120, Survey .....	1	1	H. E. 111, Sewing .....	(3)	1
H. E. 110, Sewing .....	(3)	1	Art 115, Freehand Drawing .....	1 (3)	2
Art 114, Freehand Drawing .....	1 (3)	2	Zool. 108, Economic .....	3 (4)	4½
Phy. Edu. 131 .....	(3)	1	Phy. Edu. 132 .....	(3)	1
SPRING QUARTER					
	Hrs.	Cr.		Hrs.	Cr.
Eng. 132, College .....	3	3			
Chem. 108, Inorganic .....	3 (3)	4			
H. E. 117, Foods .....	1 (6)	3			
Pub. Spk. 130, Essentials .....	3	3			
Art 116, Freehand Drawing .....	1 (3)	2			
H. E. 112, Sewing .....	(3)	1			
Phy. Edu. 133 .....	(3)	1			

An elective from the following subjects may be selected: Music, Typewriting, Shorthand. All Freshmen are required to attend classes in Social Observances.

#### SOPHOMORE YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Eng. 224, Composition .....	3	3	Eng. 225, Composition .....	3	3
Chem. 224, Household Organic ...	3 (3)	4	Bact. 207, Household .....	3 (6)	5
Edu. 220, Psychology .....	4	4	H. E. 221, Food Study .....	1 (3)	2
H. E. 210, House Plans .....	1 (3)	2	Physiol. 206, Advanced .....	2 (3)	3
H. E. 215, House Management ...	1 (3)	2	H. E. 211, Decoration .....	1 (3)	2
Phy. Edu. ....	(3)	1	H. E. 216, Textiles .....	2 (3)	3
SPRING QUARTER			Phy. Edu. ....	(3)	1
	Hrs.	Cr.			
Eng. 237, H. E. Journalism .....	3	3			
Physics 121, Household .....	3 (3)	4			
H. E. 222, Food Study .....	1 (3)	2			
Edu. 122, Methods .....	4	4			
Physiol. 207, Advanced .....	2 (3)	3			
Phy. Edu. ....	(3)	1			

NOTE—Students wishing to major in foods are advised to elect Advanced Chemistry.

## JUNIOR YEAR (GENERAL)

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
H. E. 320, Nutrition .....	3	3	H. E. 321, Nutrition .....	3	3
Econ. 218, Principles .....	3	3	Edu. 444, Gen. Sociology .....	3	3
H. E. 330, Hist. Costume .....	3	3	H. E. 331, Dress Design .....	(6)	2
H. E. 447, Home Nursing .....	2	2	H. E. 324, Dressmaking .....	(6)	2
H. E. 323, Dressmaking .....	(6)	2	H. E. 448, Home Nursing .....	2	2
Electives .....	4		Electives .....		5
SPRING QUARTER				Hrs.	Cr.
			H. E. 322, Dietetics .....	2 (3)	3
			Pub. Spk. 330, Advanced .....	3	3
			H. E. 450, Home Nursing .....	2	2
			Electives .....		9

Candidates for the degree in Smith-Hughes Teacher Training must elect eleven hours of credit during their Freshman and Sophomore years.

## SENIOR YEAR (GENERAL)

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
H. E. 460, Seminar .....	1	1	H. E. 461, Seminar .....	1	1
H. E. 450, Food Demonstration .....	1 (3)	2	H. E. 411, Millinery .....	1 (6)	3
Eng. 237, Journalism .....	3	3	Electives .....		13
H. E. 444, Food Service .....	1 (3)	2			
H. E. 440, Child Welfare .....	2 (3)	3			
Electives .....		6			
SPRING QUARTER				Hrs.	Cr.
			H. E. 462, Seminar .....	1	1
			H. E. 412, Millinery .....	1 (6)	3
			Electives .....		13

## JUNIOR YEAR (SMITH-HUGHES TEACHER TRAINING)

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
H. E. 310, Nutrition .....	3	3	H. E. 311, Nutrition .....	3	3
Econ. 218, Principles .....	3	3	Edu. 444, Gen. Sociology .....	3	3
H. E. 330, Hist. of Costume .....	3	3	H. E. 331, Dress Design .....	(6)	2
H. E. 323, Dressmaking .....	(6)	2	H. E. 324, Dressmaking .....	(6)	2
H. E. 320, Housewifery .....	(3)	1	H. E. 326, Laundering .....	1 (6)	3
H. E. 447, Home Nursing .....	2	2	H. E. 448, Home Nursing .....	2	2
Electives .....	5		Electives .....		3
SPRING QUARTER				Hrs.	Cr.
			H. E. 322, Dietetics .....	2 (3)	3
			Pub. Spk. 333, Extempore .....	3	3
			H. E. 323, Dressmaking .....	(6)	2
			H. E. 328, Special Methods in .....		
			H. E. ....	2 (3)	3
			H. E. 449, Home Nursing .....	2	2
			H. E. 327, Household Economics .....	3	3
			Electives .....		2

## SENIOR YEAR (SMITH-HUGHES TEACHER TRAINING)

¼

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
H. E. 460, Seminar .....	1	1	H. E. 461, Seminar .....	1	1
H. E. 440, Child Welfare .....	2 (3)	3	H. E. 441, Millinery .....	1 (6)	3
H. E. 464, House Administration .....	(6)	2	Electives .....		14
H. E. 445, Practice Teaching .....	4 (6)	6			
H. E. 450, Food Demon. ....	1 (3)	2			
Electives .....		5			
SPRING QUARTER				Hrs.	Cr.
			H. E. 462, Seminar .....	1	1
			H. E. 442, Millinery .....	1 (6)	3
			Electives .....		14

Eng. 237 will be given each Quarter. Eng. 231-232 may be taken in place of 237.

## SUBJECTS

110 SEWING. Laboratory 3 hours. Credit 1.

This work gives practice in hand and machine sewing, simple embroidery stitches, mending, use and alteration of commercial patterns.

NOTE: Students who have had sufficient high school sewing may be exempt by passing a satisfactory examination.

- 111 SEWING. Laboratory 3 hours. Credit 1.

Continuation of H. E. 110.

Special emphasis will be placed on the fit and general appearance of the garments made. A foundation pattern will be drafted.

- 112 SEWING. Laboratory 3 hours. Credit 1.

Continuation of H. E. 111.

This will include the making of outer garments, one of which will be wool.

- 113 SEWING. Laboratory 3 hours. Credit 1.

A course including the fundamental processes of clothing construction and a sufficient study of fabrics to enable the student to identify those in common use.

- 115 ELEMENTARY FOOD STUDY. Laboratory 3 hours. Credit 1.

A simple course of food preparation and laboratory technic for the girl who does not offer an approved entrance credit in Home Economics.

- 116 SELECTION AND PREPARATION OF FOODS. Class 1 hour, laboratory 6 hours. Credit 3.

Prerequisite: H. E. 115, or equivalent.

This course deals with the economic value and preparation of typical foods.

- 117 SELECTION AND PREPARATION OF FOODS. Class 1 hour, laboratory 6 hours. Credit 3.

A continuation of 116, including simple meal serving.

- 120 SURVEY. Class 1 hour. Credit 1.

This course includes a general study of practical problems pertaining to thrift, hygiene, study of prices, home surroundings and influence.

The keeping of weekly expense account is required.

- 210 HOUSE PLANS. Class 1 hour, laboratory 3 hours. Credit 2.

This course deals with the study of arrangements of the modern home from the standpoint of economy, convenience and practical design.

- 211 HOUSE DECORATION. Class 1 hour, laboratory 3 hours. Credit 2.

This course includes the study and application of design so as to develop good taste in the selection and arrangement of home furnishing.

- 215 HOUSE MANAGEMENT. Class 1 hour, laboratory 3 hours. Credit 2.

This course involves the problems of bookkeeping, house furnishing from the practical viewpoint and the budget system. It is the aim of the course to train the students in order that they may have full management of the home.

- 216 TEXTILES. Class 2 hours, laboratory 3 hours. Credit 3.

Lecture covers manufacturing and production of cotton, wool, silk and flax fibers.

Laboratory includes physical and microscopic properties of the common fabrics.

- 221 FOOD STUDY. Class 1 hour, laboratory 3 hours. Credit 2.

Prerequisite: H. E. 117.

Organic Chemistry.

Bacteriology credit of concurrent registration.

An introduction to the scientific study of foods, their preparation and preservation.

222 FOOD STUDY. Class 1 hour, laboratory 3 hours. Credit 2.

Prerequisite: H. E. 221.

A continuation of 221 with application to the planning, preparation and serving of meals.

320, 321. NUTRITION. Class 3 hours. Credit 3.

Prerequisite: H. E. 205, Chem. 212, Physiol. 202.

A study of the processes of digestion and metabolism, the fuel value of foods, and the energy requirements of the body.

322 DIETETICS. Class 2 hours, laboratory 3 hours. Credit 3.

Prerequisite: H. E. 311.

A study of the dietaries of individuals and groups as influenced by age, sex and activities.

323 DRESSMAKING. Laboratory 6 hours. Credit 2.

This course applies the principles of design to the making of clothing. Patterns will be designed from drafted foundations and by modeling of the form. Garments will be made from the patterns designed in class.

324 DRESSMAKING. Laboratory 6 hours. Credit 2.

Continuation of H. E. 315, with emphasis in technic of dressmaking construction.

325 CLOTHING FOR CHILDREN. Laboratory 6 hours. Credit 2.

The application of fine needlework to infants' clothing, and the making of various types of garments for children of all ages.

326 HOUSEHOLD LAUNDRY. Class 1 hour, laboratory 6 hours. Credit 3.

Cleaning, dyeing, renovating and pressing will be studied from an efficient and practical point of view.

327 HOUSEHOLD ECONOMICS. Class 3 hours. Credit 3.

The study of family budgets, woman's responsibility of judicious expenditures of incomes.

328 SPECIAL METHODS IN HOME ECONOMICS EDUCATION. Class 2 hours, laboratory 3 hours. Credit 3.

Prerequisite: All preceding subjects in Teachers' Training Course.

Course offered in Winter and Spring term. Open to Juniors and Seniors.

A review of the development of general education for women and a study of the home economics movement. Observation of teaching required. One home project completed during summer.

Text: *Teaching Home Economics*, Cooley, Winchell and Spore and Marshall.

329 HOUSEWIFERY. Laboratory 3 hours. Credit 1.

This course involves the study of household equipment, electrical and mechanical, with special emphasis upon the efficient working equipment.

330 HISTORY OF COSTUME. Class 3 hours. Credit 3.

In this course the student makes an extensive study of the development of styles through the past generations up to the present time, special emphasis being placed upon the healthful and practical garment of today.

331 DRESS DESIGN. Laboratory 6 hours. Credit 2.

This course includes the study of design principles applied to dress; the selection, cost and care of dress; original dress designs.

- 440 CHILD WELFARE. Class 2 hours, laboratory 3 hours. Credit 3.

Open to Juniors and Seniors only.

This course is planned according to the government bulletin on child welfare with special application to local problems.

Will be offered Fall, Winter and Spring Quarters.

- 441-442 ELEMENTARY MILLINERY. Class 1 hour, laboratory 6 hours. Credit 3.

This course considers the methods of manipulation in the construction of hat frames; the use and renovating of old materials; the preparation of trimmings; the study of color, shape and trimming as to suitability, becomingness and income.

- 443 ADVANCED MILLINERY. Class 1 hour, laboratory 6 hours. Credit 3.

Advanced practice in making frames, finishing hats and trimmings.

- 444 FOOD SERVICE. Class 1 hour, laboratory 3 hours. Credit 2.

Open to Juniors and Seniors in Home Economics.

Cooking of food in large quantities, planning and serving meals.

Will be offered Fall, Winter and Spring Quarters.

- 445 PRACTICE TEACHING. Class 4 hours, laboratory 6 hours. Credit 6.

Prerequisite: H. E. 316.

Open only to Seniors in the teacher-training department of the School of Home Economics.

Offered throughout the school year. Planning courses of study, and equipment of schools. Study all available literature. Practice teaching under supervision required.

Each student will be required to buy one reference book.

- 446 EXPERIMENTAL COOKERY. Laboratory 6 hours. Credit 2.

Prerequisite: H. E. 205; Chemistry 212; Bacteriology 303.

A course planned to give opportunity to do experimental cooking. Class and individual problems.

Will be offered each quarter. Additional hours may be arranged for on approval of the Dean.

- 447, 448, 449 HOME NURSING. Class 2 hours. Credit 2.

This work in nursing is planned to meet the needs of the home nurse, from the practical point of view. The course as it is outlined covers disease, cause and prevention, care of the sick room, sick persons and food best suited to their ailments. Bandages of all kinds are demonstrated and used before the class, in connection with the work.

Open to Juniors and Seniors.

- 450 FOOD DEMONSTRATION WORK. Class 1 hour, laboratory 3 hours. Credit 2.

Prerequisite: H. E. 322.

The plan of this course of study in foods is to give the student a chance to build toward demonstration work in Home Economics.

The demonstration field in our state is new and the possibilities of the work are far-reaching in their scope. Thus this course meets the teacher's need as well as the need of the field worker.

- 460, 461, 462 SEMINAR. Class 1 hour. Credit 1. Each Quarter.

Seminar work is required of all students in Senior Home Economics courses. It will also be required of students in graduate study. One hour per week will be given over to some special problem pertaining to home economics science at which time the home economics school and faculty will

assemble. The aim of this work is to give a broad foundation in scientific lines pertaining to home work.

463 ADVANCED NUTRITION. Class 2 hours, laboratory 3 hours. Credit 3.  
Prerequisite: H. E. 314.

A study of the recent advances in the field of food and nutrition with special application to the problems of the public nutrition worker.  
Will be offered Fall, Winter and Spring Quarters.

464 HOUSE ADMINISTRATION. Laboratory 6 hours. Credit 2.  
All seniors in the Smith-Hughes course are required to enroll in this course, which covers home management, laundry, meal planning and service, buying and selecting. A real baby also is kept in the house, for actual care by Seniors.

470 ADVANCED DRESS MAKING. Laboratory 6 hours. Credit 2.  
Includes advanced design and construction with problems in tailoring.

490 HOME ECONOMICS JOURNALISM. Class 2 hours. Credit 2  
Special scientific field open for research work and undergraduate problems pertaining to the progress of Home Economics work.  
Elective in sewing course for Domestic Art majors.

# VOCATIONAL HOME ECONOMICS

## FIRST YEAR

FALL QUARTER			WINTER QUARTER		
	Class	Lab.		Class	Lab.
Arith. Ia .....	4		English Ib .....	5	
Eng. Ia .....	5		Arith. Ib .....	4	
Indus. Drawing Ia .....		4	Ind. Draw. Ib .....		4
H. E. Ia, Clothing .....		6	H. E. Ib, Clothing .....		6
H. E. Id, Foods and Cookery .....		6	H. E. Ie, Food Study .....		
Phys. Ed. ....		3	and Cookery .....		6
			Phys. Ed. ....		3
SPRING QUARTER					
	Class	Lab.			
Eng. Ic .....	5				
Physiol. Ic .....	5	2			
Ind. Draw. Ic .....		4			
H. E. Clothing Ic .....		6			
H. E. If, Food Study and .....					
Cookery .....		6			
Phys. Ed. ....		3			

## SECOND YEAR

FALL QUARTER			WINTER QUARTER		
	Class	Lab.		Class	Lab.
Eng. IIa .....	5		Eng. IIb .....	5	
Gen. Sci. IIa .....	3	4	Gen. Science IIb .....	3	4
H. E. IIIa, Home Nursing .....			H. E. IIIb, House Planning .....		6
and Hygiene .....	3	2	and Furnishing .....		6
H. E. IIa, Dressmaking and .....			H. E. IIb, Dressmaking .....		6
Millinery .....		6	and Millinery .....		6
H. E. IIId, Food Study and .....			H. E. IIe, Food Study and .....		6
Food Preservation .....		6	Ele. Dietetics .....		6
Phys. Ed. ....		3	Phys. Ed. ....		3
SPRING QUARTER					
	Class	Lab.			
Eng. IIc .....	5				
H. E. IIId, Housekeeping .....		4			
Gen. Sci. IIc .....	3	4			
H. E. IIc, Dressmaking and Mili. .....		6			
H. E. IIId, Planning and Serving .....					
Meals .....		6			
Phys. Ed. ....		3			

## SUBJECTS

H. E. I A CLOTHING. Laboratory 6 hours.

Principles of hand and machine sewing as applied to simple garments.  
Mending and patching, care and repair of clothing, study of textiles and

fabrics used. Hygiene of clothing, individual projects in construction.  
Text: "Textiles and Clothing," McGowan and Wait.

H. E. I B CLOTHING. Laboratory 6 hours.  
Continuation of Clothing I A.

H. E. I C CLOTHING. Laboratory 6 hours.  
Continuation of Clothing I B.

H. E. I D FOOD STUDY AND COOKERY. Laboratory 6 hours.  
Study of foods covering source, purchase, cost, food value, preparation for use. Practice in preparation of foods including cost and service.  
Text: "Food and Its Preparation," Dawd and Jamison.

H. E. I E FOOD STUDY AND COOKERY. Laboratory 6 hours.  
Continuation of Food Study and Cookery I A.

H. E. I F FOOD STUDY AND COOKERY. Laboratory 6 hours.  
Continuation of Food Study and Cookery I B.

H. E. II A DRESSMAKING AND MILLINERY. Laboratory 6 hours.  
Study of textile fibers and fabrics, clothing appreciation, costume design, history of costume, economics of clothing, elementary dressmaking, renovating of garments.

H. E. II B. DRESSMAKING AND MILLINERY. Laboratory 6 hours.  
Continuation of H. E. II B. Dressmaking.

H. E. II C DRESSMAKING AND MILLINERY. Laboratory 6 hours.  
Continuation of Course IIB.

H. E. II D FOOD STUDY AND FOOD PRESERVATION. Laboratory 6 hours.  
Food study and cookery including methods of food preservation.

H. E. II E FOOD STUDY AND ELEMENTS OF DIETETICS. Laboratory 6 hours.  
Study of food for family group. Feeding of children, etc.  
Text: "Dietetics for High Schools," Willard and Gillette.

H. E. II F FOOD STUDY—PLANNING AND SERVING MEALS. Laboratory 6 hours.  
Study of food for family groups with emphasis on marketing, cost, and preparation. Preparing and serving meals.

H. E. III A HOME NURSING HYGIENE. Class 3 hours, laboratory 3 hours.  
A study of home care of the sick; general care of the sick room, emergencies.

Text: "American Red Cross Text Book on Home Hygiene and Care of the Sick."

H. E. III B HOUSE PLANNING AND FURNISHING. Laboratory 6 hours.

Study of modern house from standpoint of sanitation, location, floor space, arrangement and cost. Practical course in house furnishing.

H. E. IIIC HOUSEKEEPING. Laboratory 4 hours.

Care of the house, laundering, household accounts. Students do home projects, actual practice in home management.

Text: "Manual of Home Making," Van Renuislaer, Rose and Cannon.

INDUSTRIAL DRAWING I A Practise 4 hours.

Principles of design and harmony of colors through decorative arrangement and artistic rendering for observation of nature forms.

INDUSTRIAL DRAWING I B Practice 4 hours.

Principles of constructive design and color applied to problems in industrial art, including paper, cardboard, and cloth.

INDUSTRIAL DRAWING I C Practice 4 hours.

Principles of applied art. Problems in reed, enamel, etc.

**THE SCHOOL OF SCIENCE AND LITERATURE**



# FACULTY

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- JAMES BURNETTE ESKRIDGE, A. M., Ph. D.; *President of the College.*
- LOWERY LAYMON LEWIS, B. S. A., M. S., D. V. M.; *Dean of the Faculty, Dean of the School of Science and Literature, Professor of Zoology and Bacteriology.*
- CARL GUNDERSEN, A. B., A. M., Ph. D.; *Professor of Mathematics.*
- CHARLES OSCAR CHAMBERS, A. B., A. M., Ph. D.; *Professor of Botany.*
- EDWARD CLARK GALLAGHER, B. S.; *Director of Athletics, Professor of Physical Education.*
- BOHUMIL MAKOVSKY, *Director of Music, Professor of Brass and Reed Instruments.*
- \*HILTON IRA JONES, A. B., A. M., Ph. D.; *Professor of Chemistry.*
- ALBERT SAMUEL HIATT, A. B.; *Professor of History.*
- JOHN HOFER CLOUD, A. B., A. M., Ph. D.; *Professor of Physics.*
- ALMON AI ARNOLD, A. B., A. M.; *Professor of Modern Languages.*
- DAVID TERRY MARTIN, A. B.; *Professor of Public Speaking.*
- WILLIAM BENJAMIN PARKS, A. M., S. M., Ph. D.; *Professor of Chemistry.*
- WILLIAM PTOLEMY POWELL, B. A., M. A.; *Professor of English.*
- RUTH DuBOIS, Diploma, A. B.; *Professor of Physical Education for Women.*
- ROBERT E HARTSOCK, S. B., A. B.; *Professor of Mathematics.*
- JUDSON ALLEN TOLMAN, A. B., A. M., Ph. D.; *Professor of Ancient Languages.*
- ROBERT OSCAR WHITENTON, A. B., M. S.; *Associate Professor of Zoology.*
- CLARENCE HAMILTON McELROY, B. S., D. V. M.; *Associate Professor of Bacteriology.*
- ROBERT DuBOIS, B. A., M. S.; *Associate Professor of Chemistry.*
- GRACE ALICE MOUNTCASTLE, Ph. B.; *Associate Professor of English.*
- AGNES BERRIGAN, B. A., M. A.; *Associate Professor of English.*
- JAMES HENRY CALDWELL, *Assistant Professor of History.*
- EWALD W. SCHUHMANN, A. B., A. M.; *Assistant Professor of Physics.*
- EDWARD McCARREL, A. B.; *Assistant Professor of Mathematics.*
- HARRY WILLIAM ORR, D. V. M.; *Assistant Professor of Physiology and Bacteriology.*
- ROBERT STRATTON, B. A., M. A.; *Assistant Professor of Botany and Plant Pathology.*
- EMELIA MARIE SKARRA, Diploma; *Assistant Professor of Physical Education for Women.*
- CHARLES LESLIE NICKOLLS, B. S., M. A.; *Assistant Professor of Chemistry.*
- THOMAS MALCOLM AYCOCK, B. S.; *Assistant Professor of Physical Education.*
- JANE PORTER SLOSS, Graduate; *Instructor in Piano.*
- DAISY DELL McCOOL, Diploma; *Acting Head of Art Department, Instructor in Art.*
- MARY ELEANOR LOCKWOOD, A. B.; *Instructor in Modern Languages.*
- FRANK HADKY, Jr., *Head of Violin Department, Instructor in Violin.*
- LEONA KATHERINE SIEGLINGER, B. S.; *Instructor in Physics.*
- ELIZABETH KATHERINE MOREHARDT, Diploma; *Instructor in Voice.*
- JOHN WILSON BRIGHAM, *Head of Voice Department, Instructor in Voice.*
- HARRIET RUBY ENSWORTH, Ph. B.; *Instructor in English.*
- MABEL POLK, *Instructor in Art.*
- THAMAZIN HUTCHINS, B. M.; *Instructor in Piano.*
- DANIEL L. HUFFMAN, B. M.; *Head of Piano Department, Instructor in Piano.*
- SYLVAN R. WOOD, B. S.; *Instructor in Chemistry.*
- JOHN FREDERICK MAULBETSCH, B. S.; *Coach of Football, Basketball and Baseball.*
- ROY WASHINGTON KENNY, B. S.; *Assistant Coach of Athletics.*
- HERBERT PATTERSON, A. B., A. M., Ph. D.; *Dean of the School of Education, professor of Education.*
- CHARLES EMERSON SANBORN, A. B., A. M.; *Professor of Entomology.*
- JOSEPH BENJAMIN PATE, B. A., Major, Inf., U. S. Army; *Commandant, Professor of Military Science and Tactics.*
- JOSEPH HOWARD RUSTEMEYER, Captain, Inf., U. S. Army; *Professor of Military Science and Tactics.*
- JOSEPH JOHN SCHMIDT, Captain, Inf., U. S. Army; *Professor of Military Science and Tactics.*
- JOHN MARVIN HAGENS, Captain, Inf., U. S. Army; *Professor of Military Science and Tactics.*
- SOLOMON LUTHER REED, A. B., A. M., Ph. D.; *Professor of Education.*
- FRED McCARREL, B. S., M. S.; *Associate Professor of Education.*
- WILLIAM EDGAR JACKSON, B. S., M. S.; *Assistant Professor of Entomology.*
- \*On leave of absence.

## SCHOOL OF SCIENCE AND LITERATURE

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The courses in the School of Science and Literature offer a sound basis for training in mathematics, chemistry, physics, biological sciences and in the languages. It is also becoming more and more evident that one's education should include some work in history, social science and in economics. These related subjects give a better understanding of one's duties and responsibilities as a citizen, and a broad and liberal view of the relations of the individual to society.

The work of the School is presented to the prospective student along three lines. The Freshman year is the same for those electing the general science and the exact science work. For those electing the general literature course, a separate outline, in part, has been arranged. With this minor difference in the Freshman year, the differentiation of the work in the three divisions appears in the Sophomore year. First, the general science work, where biological and chemical science represent a large part of the science work offered; second, the exact science work, represented largely by mathematics, physics and chemistry; and third, in the general literature division, where work in English and the modern languages represents a large portion of the course, but opportunities are offered for work in sociology, economics and education. Where other courses offer vocational subjects, the science and literature work, by means of groups of electives offers special opportunities for work in either the sciences or language. Opportunities for selecting work of this character meets the needs of students desiring a liberal education as a foundation for professional courses, as law or medicine, as well as those students who desire to secure a training that is well balanced in respect to literature, science and cultural subjects.

### *ELECTIVES*

Students who elect either the exact or general science work will be permitted to substitute in either of these courses work selected from the other course, and to some extent work selected from other courses offered in the College. Such substitution will be permitted

after consultation with the Dean of the School, and approval of the Committee on Substitutions.

Electives in the general literature group are so arranged as to permit the student to elect along the following lines: Modern language, English, social science, history, economics or science. Students should select their electives along one of these lines.

### RELATIONS TO OTHER SCHOOLS

Besides the instruction given to students in the School of Science and Literature, the instructional force gives much of the collateral work offered in the other schools of the College. Other schools of the College cooperate in giving some of the work offered in the School of Science and Literature.

The departments represented in the School of Science and Literature are well equipped to give the work they offer. The laboratories in the Departments of Bacteriology, Botany, Chemistry, Physics and Physiology are well provided with the necessary scientific equipment to give the work offered. In January, 1920, the Department of Chemistry moved into the new Chemistry Building. The additional room and equipment afforded by this building give increased facilities to students of chemistry in all departments.

### COURSES IN THE SCHOOL OF SCIENCE AND LITERATURE

The following outline of study represents the required and elective work in the School of Science and Literature. The courses are numbered, beginning with 100 in the Freshman year. Subjects of the Sophomore, Junior and Senior years are numbered accordingly—200 for Sophomore, 300 for Junior and 400 for Senior work. One hour of laboratory work is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

The total requirements for graduation are 208 quarter credits, inclusive of any credits given in physical education.

In the outline below, figures without parenthesis indicate hours of class-work; in parenthesis hours of laboratory work.

Any student may elect the work of the Reserve Officers' Training Corps, which counts 5 hours credit in each quarter of the Junior and Senior years. This credit will be accepted as a substitute for elective work, or for required work by special arrangement.

### GENERAL SCIENCE

#### FRESHMAN YEAR

(Outline also for Exact Science.)

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Eng. 130, College .....	3	3	Eng. 131, College .....	3	3
Chem. 106, Inorganic .....	3 (3)	4	Chem. 107, Inorganic .....	3 (3)	4
Modern Language .....	3	3	Modern Language .....	3	3
Math. 112, College Algebra .....	3	3	Math. 113, College Algebra .....	3	3
Physics 112, Mechanics .....	3 (3)	4	Physics 113, Heat and Elec. ....	3 (3)	4
Phy. Edu. 131 .....	(3)	1	Phy. Edu. 132 .....	(3)	1
Mil. Sci. 101 .....	(3)	1	Mil. Sci. 102 .....	(3)	1

## Oklahoma A. and M. College

## SPRING QUARTER

	Hrs.	Cr.
Eng. 132, College .....	3	3
Chem. 108, Inorganic .....	3 (3)	4
Modern Language .....	3	3
Physics 114, Sound and Light .....	3 (3)	4
Art 121, Freehand Drawing .....	(6)	2
Phy. Edu. 133 .....	(3)	1
Mil. Sci. 103 .....	(3)	1

## SOPHOMORE YEAR

## FALL QUARTER

	Hrs.	Cr.
Chem. 218, Qualitative Analysis .....	3 (6)	5
Eng. 224, Composition .....	3	3
Zool. 213, General .....	3 (6)	5
Math. 114, Trigonometry .....	3	3
Phy. Edu. 231, (women) .....	(3)	1
Mil. Sci. 201, (men) .....	(3)	1

## WINTER QUARTER

	Hrs.	Cr.
Chem. 219, Ele. Organic .....	3 (6)	5
Eng. 225, Composition .....	3	3
Zool. 214, Vertebrate .....	2 (6)	4
Modern Language .....	5	5
Phy. Edu. 232, (women) .....	(3)	1
Mil. Sci. 202 .....	(3)	1

## SPRING QUARTER

	Hrs.	Cr.
Math. 214, Astronomy .....	3	3
Zool. 215, Invertebrate .....	3 (6)	5
Pub. Spk. 130, Essentials .....	3	3
Modern Language .....	5	5
Phy. Edu. 233, (women) .....	(3)	1
Mil. Sci. 203 .....		1½

## JUNIOR YEAR

## FALL QUARTER

	Hrs.	Cr.
Bot. 310, General .....	3 (6)	5
Bact. 316, General .....	3 (6)	5
Chem. 330, General Organic .....	3 (6)	5
Electives .....	3	

## WINTER QUARTER

	Hrs.	Cr.
Bot. 311, General .....	3 (6)	5
Chem. 331, Gen. Organic .....	3 (6)	5
Modern Language .....	4	4
Electives .....		2

## SPRING QUARTER

	Hrs.	Cr.
Modern Language .....	4	4
Chem. 332, General Organic .....	3 (6)	5
Ento. 206, General .....	4 (2)	4½
Electives .....		3

## SUGGESTED JUNIOR ELECTIVES

## FALL QUARTER

	Hrs.	Cr.
Econ. 218, Principles .....	3	3
Chem. 333, Geology .....	3	3
Ento. 310, Horticultural .....	3 (4)	4½

## WINTER QUARTER

	Hrs.	Cr.
Chem. 331, General Organic .....	3 (6)	5
Chem. 335, Pet. Tech. ....	3 (6)	5

## SPRING QUARTER

	Hrs.	Cr.
Chem. 332, General Org. ....	3 (6)	5
Pub. Spk. 230, Arg. and Debate .....	3	3
Ento. 311, Agricultural .....	3 (2)	3½

## SENIOR YEAR

## FALL QUARTER

	Hrs.	Cr.
Bact. 410, Technical .....	3 (6)	5
Edu. 220, General Psy. ....	4	4
Hist. 415, Industrial .....	5	5
Electives .....		3

## WINTER QUARTER

	Hrs.	Cr.
Bact. 411, Immunity .....	3 (6)	5
Zool. 408, Vertebrate Emb. ....	3 (3)	5
Electives .....		7

## SPRING QUARTER

	Hrs.	Cr.
Zool. 407, Variation, Heredity and Evolution .....	4 (3)	5
Bot. 421, Teaching of Botany .....	2 (6)	4
Electives .....		8

## SUGGESTED SENIOR ELECTIVES

## FALL QUARTER

	Hrs.	Cr.
Chem. 433, Physical .....	3 (6)	5
Chem. 430, Physiological .....	3 (4)	4½
Chem. 436, Industrial .....	3 (6)	5

## WINTER QUARTER

	Hrs.	Cr.
Chem. 434, Physical .....	3 (6)	5
Chem. 437, Industrial .....	3 (6)	5

## SPRING QUARTER

	Hrs.	Cr.
Chem. 432, Physiological .....	3 (4)	4½
Chem. 435, Physical .....	3 (6)	5
Chem. 438, Industrial .....	3 (6)	5

EXACT SCIENCE

SOPHOMORE YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Chem. 218, Qualitative .....	3	(6) 5	Chem. 219, Organic .....	3	(3) 4
Eng. 224, Composition .....	3	3	Eng. 225, Composition .....	3	3
Physics 115, Mechanics .....	2	(3) 3	Physics 116, Heat and Elec. ....	2	(3) 3
Chem. 333, Geology .....	3	3	Math. 115, Analytics .....	3	3
Phy. Edu. 231, (women) .....	(3)	1	Phy. Edu. 232, (women) .....	(3)	1
Mil. Sci. 201 .....		1	Mil. Sci. 202 .....	(3)	1

SPRING QUARTER

	Hrs.	Cr.
Math. 116, Analytics .....	3	3
Physics 117, Sound and Light .....	2	(3) 3
Pub. Spk. 130, Essentials .....	3	3
Math. 214, Astronomy .....	3	3
Chem. 334, Blow Pipe Analysis ....	1	(6) 3
Phy. Edu. 233, (women) .....	(3)	1
Mil. Sci. 203 .....		1½

JUNIOR YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Chem. 330, General Organic .....	3	(6) 5	Chem. 331, General Organic .....	3	(6) 5
Physics 330, Kinematics and Kinetics .....	4	(3) 5	Physics 331, Thermo-Dynamics ....	4	(3) 5
Math. 210, Calculus .....	3	3	Math. 211, Calculus .....	3	3
Hist. 313, Latin American .....	5	5	Modern Language .....	5	5

SPRING QUARTER

	Hrs.	Cr.
Chem. 332, General Organic .....	3	(6) 5
Pub. Spk. 230, Arg. and Debate .....	3	3
Math. 212, Calculus .....	3	3
Modern Language .....	5	5

SENIOR YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Chem. 433, Physical .....	3	(6) 5	Chem. 434, Physical .....	3	(6) 5
Physics 119, Electricity .....	4	(3) 5	Physics 441, Optics .....	4	(3) 5
Modern Language .....	4	4	Modern Language .....	4	4
Math. 310, Calculus .....	3	3	Math. 311, Calculus .....	3	3

SPRING QUARTER

	Hrs.	Cr.
Chem. 435, Physical .....	3	(6) 5
Edu. 220, Gen. Psy. ....	4	4
Math. 312, Differential Equations ..	3	3
Physics 442, Teachers Course .....	3	3
Electives .....		2

GENERAL LITERATURE

FRESHMAN YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Eng. 130, College .....	3	3	Eng. 131, College .....	3	3
Chem. 106, Inorganic .....	3	(3) 4	Chem. 107, Inorganic .....	3	(3) 4
Modern Language .....	3	3	Modern Language .....	3	3
Edu. 120, School Hygiene .....	4	4	Edu. 121, Ele. Psy. ....	4	4
Art 121, Freehand Drawing .....	(6)	2	Hist. 107, Ind. Hist. of Eng. ....	3	3
Phy. Edu. 131 .....	(3)	1	Phy. Edu. 132 .....	(3)	1
Mil. Sci. 101 .....		1	Mil. Sci. 102 .....		1

SPRING QUARTER

	Hrs.	Cr.
Eng. 132, College .....	3	3
Chem. 108, Inorganic .....	3	(3) 4
Modern Language .....	3	3
Edu. 122, Methods .....	4	4
Hist. 108, Ind. Hist. of Eng. ....	3	3
Phy. Edu. 133 .....	(3)	1
Mil. Sci. 102 .....		1

## SOPHOMORE YEAR

FALL QUARTER				WINTER QUARTER	
	Hrs.	Cr.		Hrs.	Cr.
Eng. 224, Composition .....	3	3	Eng. 225, Composition .....	3	3
Modern Language .....	5	5	Modern Language .....	5	5
Eng. 330, Literary Appreciation ....	3	3	Hist. 210, English .....	5	5
Eng. 231, English Literature .....	5	5	Eng. 232, English Lit. ....	4	4
Phy. Edu. 231, (women) .....	(3)	1	Phy. Edu. 232, (women) .....	(3)	1
Mil. Sci. 201 .....		1	Mil. Sci. 202 .....		1
SPRING QUARTER					
	Hrs.	Cr.		Hrs.	Cr.
Pub. Spk. 130, Essentials .....	3	3			
Hist. 211, English .....	4	4			
Hist. 310, Ind. of U. S. ....	5	5			
Edu. 220, General Psy. ....	4	4			
Phy. Edu. 233, (women) .....	(3)	1			
Mil. Sci. 203 .....		1½			

## JUNIOR YEAR

FALL QUARTER				WINTER QUARTER	
	Hrs.	Cr.		Hrs.	Cr.
Eng. 327, American Poetry .....	3	3	Hist. 311, United States .....	5	5
Modern Language .....	4	4	Eng. 328, American Prose .....	3	3
Electives .....		10	Modern Language .....	4	4
SPRING QUARTER					
	Hrs.	Cr.		Hrs.	Cr.
Hist. 312, United States .....	4	4			
Edu. 444, General Sociology .....	3	3			
Electives .....		10			

## SUGGESTED JUNIOR ELECTIVES

FALL QUARTER				WINTER QUARTER	
	Hrs.	Cr.		Hrs.	Cr.
Eng. 324, Editorial Writing .....	3	3	Eng. 325, Magazine Writing .....	3	3
Bact. 316, General .....	3 (6)	5	Eng. 331, The Story .....	3	3
Zool. 213, General .....	3 (6)	5	Bot. 311, General .....	3 (6)	5
Bot. 310, General .....	3 (6)	5	Edu. 221, Edu. Psy. ....	4	4
Edu. 220, Gen. Psy. ....	4	4			
Pub. Spk. 330, Advanced .....	3	3			
SPRING QUARTER					
	Hrs.	Cr.		Hrs.	Cr.
Eng. 326, Current Periodicals .....	3	3			
Eng. 330, Eng. Appreciation .....	3	3			
Hist. 313, Latin American .....	5	5			
Edu. 321, Methods of teaching .....					
High School .....	4	4			
Pub. Spk. 331, Lit. Interpretation ..	3	3			

## SENIOR YEAR

FALL QUARTER				WINTER QUARTER	
	Hrs.	Cr.		Hrs.	Cr.
Hist. 410, Modern Europe .....	5	5	Hist. 411, Modern Europe .....	5	5
Modern Language .....	4	4	Eng. 427, The Novel .....	5	5
Electives .....		8	Modern Language .....	4	4
SPRING QUARTER					
	Hrs.	Cr.		Hrs.	Cr.
Hist. 414, Contemporary World ....	5	5			
Eng. 428, The Novel .....	4	4			
Electives .....		4			

## SUGGESTED SENIOR ELECTIVES

FALL QUARTER				WINTER QUARTER	
	Hrs.	Cr.		Hrs.	Cr.
Eng. 431, Shakespeare .....	3	3	Eng. 432, Shakespeare .....	3	3
Eng. 425, Victorian Poets .....	5	5	Eng. 426, Romantic Poets .....	5	5
Eng. 429, Masterpieces .....	3	3	Hist. 413, Political Theory .....	5	5
Hist. 412, Government .....	4	4	Bact. 411, Immunity .....	3 (6)	5
Bact. 410, Technical .....	3 (6)	5			
SPRING QUARTER					
	Hrs.	Cr.		Hrs.	Cr.
Eng. 433, English Bible .....	3	3			
Eng. 424, Carlyle and Ruskin .....	5	5			
Eng. 430, Masterpieces .....	3	3			
Zool. 407, Variation, Heredity .....					
and Evolution .....	4 (3)	5			

## PHYSICAL EDUCATION

Only Freshmen and Sophomore courses and those subjects of the Junior and Senior years giving credit toward certificate offered during year 1922-23.

## FRESHMAN YEAR

## FALL QUARTER

	Hrs.	Cr.
Eng. 130, College .....	3	3
Math. 112, College Algebra .....	3	3
Chem. 106, Inorganic .....	3 (3)	4
Phy. Edu. 141, Hygiene .....	2	2
Phy. Edu. 151, Play and Rec. ....	2	2
Phy. Edu. 161, (women) .....	(3)	1
Phy. Edu. 131 .....	(3)	1
Mil. Sci. 101 .....	(3)	1

## WINTER QUARTER

	Hrs.	Cr.
Eng. 131, College .....	3	3
Math. 113, College Algebra .....	3	3
Chem. 107, Organic .....	3 (3)	4
Phy. Edu. 142, Hygiene .....	2	2
Phy. Edu. 152, Play and Rec. ....	2	2
Phy. Edu. 162, (women) .....	(3)	1
Phy. Edu. 132 .....	(3)	1
Mil. Sci. 102 .....	(3)	1

## SPRING QUARTER

	Hrs.	Cr.
Eng. 132, College .....	3	3
Math. 114, Trigonometry .....	3	3
Chem. 108, Organic .....	3 (3)	4
Phy. Edu. 143, Hygiene .....	2	2
Art 121, Freehand Drawing .....	(6)	2
Phy. Edu. 153, Play and Rec. ....	2	2
Phy. Edu. 163, (women) .....	(3)	1
Phy. Edu. 133 .....	(3)	1
Mil. Sci. 103 .....	(3)	1

## SOPHOMORE YEAR

## FALL QUARTER

	Hrs.	Cr.
Edu. 220, General Psy. ....	4	4
Eng. 224, Composition .....	3	3
Eng. 231, English Literature .....	5	5
Phy. Edu. 251, First Aid .....	1 (3)	2
Zool. 213, General .....	3 (6)	5
Phy. Edu. 271 .....	(3)	1
Phy. Edu. 241, Normal .....	(3)	1
Mil. Sci. 201 .....	1	1
Electives .....	1	

## WINTER QUARTER

	Hrs.	Cr.
Edu. 221, Edu. Psy. ....	4	4
Eng. 225, Composition .....	3	3
Eng. 232, English Lit. ....	5	5
Zool. 214, Vertebrate .....	2 (6)	4
Physiol. 206, Advanced .....	2 (3)	3
Phy. Edu. 272 .....	(3)	1
Phy. Edu. 242, Normal .....	(3)	1
Mil. Sci. 202 .....		1

## SPRING QUARTER

	Hrs.	Cr.
Pub. Spk. 130, Essentials .....	3	3
Zool. 215, Invertebrate .....	3 (6)	5
Phy. Edu. 263, Track and Field ...	2 (3)	3
Phy. Edu. 273 .....	(3)	1
Phy. Edu. 243, Normal .....	(3)	1
Mil. Sci. 203 .....		1½
Electives .....		1
Physiol. 207, Adv. ....	2 (3)	3

## JUNIOR YEAR

## FALL QUARTER

	Hrs.	Cr.
Phy. Edu. 331, Physiology .....	2	2
Edu. 320, History .....	4	4
Phy. Edu. 341, History .....	2	2
Phy. Edu. 351, Observation and Practice Teaching .....	(3)	1
Human Anat. 371 .....	4	4
Phy. Edu. 361, Adv. Gymnastics ..	(5)	1½
Electives .....	2	

## WINTER QUARTER

	Hrs.	Cr.
Education 321, Psychology of Adolescence .....	3	3
Phy. Edu. 342, History .....	2	2
Phy. Edu. 352, Observation and Practice Teaching .....	(3)	1
Human Anat. 372 .....	4	4
Bact. 316, General .....	3 (6)	5
Phy. Edu. 362, Adv. Gymnastics ..	(5)	1½

## SPRING QUARTER

	Hrs.	Cr.
Edu. 322, Methods of Teaching High School .....	4	4
Phy. Edu. 333, Physical Diagnosis ..	2	2
Phy. Edu. 343, History .....	2	2
Phy. Edu. 353, Observation and Practice Teaching .....	(3)	1
Human. Anat. 373 .....	4	4
Electives .....		4

SENIOR YEAR							
FALL QUARTER				WINTER QUARTER			
	Hrs.	Cr.			Hrs.	Cr.	
Phy. Edu. 431, Kinesiology and Applied Anatomy .....	3	3	Edu. 448, Mental Tests .....	2	(3)	3	
Phy. Edu. 471, Coaching .....	2	(3)	3	Phy. Edu. 472, Coaching .....	2	(3)	3
Phy. Edu. 451, Observation and Practice Teaching .....	(3)	1		Phy. Edu. 453, Observation and Practice Teaching .....	(3)	1	
Phy. Edu. 461, Adv. Gymnastics .....	(5)	1½		Phy. Edu. 462, Adv. Gym. ....	(5)	1½	
Electives .....		8		Electives .....		8	
SPRING QUARTER							
	Hrs.	Cr.			Hrs.	Cr.	
Edu. 444, General Sociology .....	3	3					
Phy. Edu. 443, Administration and Equipment .....	3	3					
Phy. Edu. 483, Anthropometry and Medical .....	3	3					
Phy. Edu. 473, Coaching .....	2	(3)	3				
Phy. Edu. 453, Observation and Practice Teaching .....	(3)	1					
Electives .....		4					

All students must be able to pass the swimming examination. This course includes 52 quarter credits in science of which 40 are in the Department of Zoology and Physiology. This course also includes 37 credits in Education, besides Coaching (9). Total number of required quarter credits 177, elective 39. Minimum requirement for graduation is 204 hours on the quarter plan.

Electives should be taken in Science, Agriculture, Mathematics or Manual Training.

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## DEPARTMENT OF BACTERIOLOGY AND ZOOLOGY.

L. L. LEWIS, *Professor.*  
 C. H. McELROY, *Associate Professor.*  
 R. O. WHITENON, *Associate Professor.*  
 H. W. ORR, *Assistant Professor.*

The Department of Bacteriology and Zoology occupies quarters on the second floor of the old Library building. The equipment of microscopes, simple and compound; lanterns, microtomes, incubators, etc., is ample for the accommodation of all classes. The Department also is well equipped with dissectible models and skeletons as well as charts for both physiology and zoology. The department gives not only the work in bacteriology and zoology required in the science courses, but a large amount of teaching is required in other departments, as in the School of Agriculture, Home Economics, etc. The policy of the Department of Bacteriology and Zoology is to adapt the work to the needs of the students coming from other schools of the College.

The following work is offered by the department in the regular College courses:

### SUBJECTS

#### BACTERIOLOGY

206 GENERAL AGRICULTURAL. Class 3 hours, laboratory 4 hours. Credit 4½.

Prerequisite: Chem. 106, 107, 108.

This course is designed as a general course in bacteriology for agriculture students. It is a required course, and is a prerequisite for any of the ad-

vanced courses offered to agricultural students. Subject matter is such as to be of practical application in the work of agricultural students.

**207 HOUSEHOLD.** Class 3 hours, laboratory 6 hours. Credit 5.

Prerequisite: Chem. 106, 107, 108.

Required of Home Economics.

This course is given for the students in home economics, and as far as possible is made to apply to the work in which these students are most interested.

Text: "Bacteriology," Buchanan.

**208 VETERINARY BACTERIOLOGY.** Class 2 hours, laboratory 6 hours.

Credit 4. Winter Quarter.

Prerequisite: First Year Veterinary Medicine.

Required: Veterinary Medicine.

Elective: None.

Special emphasis is laid on the methods used in the study of micro-organisms—their classification, morphology, cultivation and physiologic characteristics.

**209 VETERINARY BACTERIOLOGY.** Class 2 hours, laboratory 6 hours.

Credit 4. Spring Quarter.

Prerequisite: Bacteriology 208.

This is a continuation of Bacteriology 208. The principles of infection and contagion and the relationship of micro-organisms to disease.

**314 SANITARY SCIENCE.** Class 3 hours, laboratory 4 hours. Credit 4½.

Prerequisite: Bact. 207 or 316.

Required in Demonstration Agents' work.

This work is designed to meet the needs of students preparing themselves for leadership as demonstration agents in agricultural work. Both the classes and laboratory work will be selected with the idea of having the students see the application of the course to problems as they affect the home, school, community, etc.

**315 AGRICULTURAL BACTERIOLOGY.** Class 2 hours, laboratory 2 hours. Credit 2½.

Prerequisite: Bact. 316 or 206.

Required: Agronomy students, Agriculture.

Elective: Agriculture and Science and Literature.

This course is offered for the benefit of science students and the students of agriculture who may desire to familiarize themselves to some extent with the importance of bacterial activities to certain phases of agricultural work. Some industrial applications of bacteriology should be understood by students who have interested themselves in science.

**316 GENERAL.** Class 3 hours, laboratory 6 hours. Credit 5.

Prerequisite: Chem. 106, 107, 108.

Required: General Science.

Elective: School of Commerce and Marketing, School of Education.

This course covers the general principles of the science and enables the student to understand the importance of bacteria as related to disease, their economy in nature and their relation to the various industries, such as dairying, soil fertility, fermentation, etc.

Text: Kendall.

**410 TECHNICAL.** Class 3 hours, laboratory 6 hours. Credit 5.

Prerequisite: Bact. 316 or 206.

Required: Science and Literature.

Elective: Education.

This course is a continuation of 316 and deals more particularly with the relation of bacteria to disease processes. Work is offered in the production of vaccines, laboratory diagnosis, etc.

- 411 ADVANCED WORK IN IMMUNITY. Class 3 hours, laboratory 6 hours. Credit 5.

Prerequisite: Bact. 410.

Required: Science and Literature.

Elective: Education.

This quarter's work completes the work in technical bacteriology in which the student is given theoretical and practical training in work along the sero-diagnosis and immunological lines. This course is intended to fit a student for taking up original problems in the subject in the capacity of an investigator or in the ever-broadening field of municipal work.

Text: Simpson, Emery, Zinsser, Kolmer.

- 412 DAIRY BACTERIOLOGY. Class 3 hours, laboratory 4 hours. Credit 4 $\frac{1}{3}$ .

Prerequisite: Bact. 316 or 206.

Required: Students in Dairying.

Elective: All Agricultural students, and Science and Literature.

A study of the bacteriology of milk and milk products. Special attention will be given to sanitation and animal diseases as they may affect the milk supply.

Text: "Milk," Heineman.

- 413 SANITARY SCIENCE. Class 1 hour, laboratory 6 hours. Credit 3. Winter Quarter.

Required: Civil Engineering.

This course is given especially to students in civil engineering. The course deals largely with the water supply, sewage disposal and the different methods of treating sewage. Time is given at the beginning of the course to familiarize the student with the general nature and relationship of bacteria to disease.

- 414 SANITARY SCIENCE. Class 1 hour, laboratory 6 hours. Credit 3. Spring Quarter.

Prerequisite: Bact. 413.

Required: Civil Engineering.

This is a continuation of 413 and deals with the practical application of Bacteriology in treating water in municipal plants, and studying systems used by different cities.

- 416-417 THESIS.

Conference one hour per week; laboratory work will vary, depending upon the character of the work. The credit will necessarily vary, depending upon the character of the work, but will not exceed 4 units for work submitted for a bachelor's degree. The object of the course will be to have the student make practical application of bacteriological methods to research problems.

#### PHYSIOLOGY

- 206 ADVANCED PHYSIOLOGY. Class 2 hours, laboratory 3 hours. Credit 3.

Prerequisite: Secondary School physiology and Freshman chemistry.

Required: Home Economics.

Elective: Science and Literature.

Particular attention is given to the physiology of nutrition and to hygiene.

- 207 **ADVANCED PHYSIOLOGY.** Class 2 hours, laboratory 3 hours. Credit 3.  
Prerequisite: Advanced Physiology 206.  
Required: Home Economics.  
Elective: Science and Literature.  
A continuation of 206 and is designed to give the student a more thorough knowledge of the fundamental subject of Physiology.

VETERINARY SCIENCE

- 316 **VETERINARY ANATOMY.** Class 4 hours, laboratory 3 hours. Credit 5.  
Prerequisite: Bact. 206.  
Required: Animal Husbandry.  
Elective: All Agricultural students.  
A study of some of the practical points of the anatomy of domesticated animals together with a fundamental course in veterinary physiology.  
Text: "Principles of Veterinary Medicine," Hadley.

- 317 **ANIMAL DISEASES.** Class 4 hours, laboratory 3 hours. Credit 5.  
Prerequisite: V. S. 316.  
Required: Animal Husbandry.  
Elective: All agricultural students.  
This course takes up the more common diseases of livestock with special emphasis upon sanitation and prevention of diseases.

- 318 **UNSOUNDNESS OF HORSES.** Class 1 hour. Credit 1. Winter Quarter.  
Prerequisite: Vet. Sci. 316.  
Required of students in Animal Husbandry.  
Anatomy and physiology of the foot and limbs. Common unsoundness of horses and principles of shoeing.

- 401 **POULTRY DISEASES.** Class 2 hours, laboratory 2 hours. Credit 2½.  
Prerequisite: Bacteriology 316.  
Required of students in Poultry Husbandry.  
Common diseases of poultry, with their causes, symptoms and treatment. Special emphasis laid on prevention of disease and the matter of sanitation.

ZOOLOGY

- 108 **ECONOMIC ZOOLOGY.** Class 3 hours, laboratory 4 hours. Credit 4⅓.  
Winter Quarter.  
This course is a general survey of the animal kingdom with emphasis on economic value.  
Required: Home Economics.

- 213 **GENERAL ZOOLOGY.** Class 3 hours, laboratory 6 hours. Credit 5.  
Fall and Spring Quarters.  
This course is based on biological principles and is a foundation for further work on invertebrates and vertebrates, for embryology and histology and genetics, and for experimental psychology and sociology.  
Required: General Science and Education.

- 214 **VERTEBRATE ZOOLOGY.** Class 2 hours, laboratory 6 hours. Credit 4.  
Winter Quarter.  
This course deals with the classification, morphology, physiology and distribution of the vertebrates. The laboratory work will be essentially comparative anatomy of the vertebrates.  
Required: General Science.  
Elective: Education.

- 215 INVERTEBRATE ZOOLOGY. Class 3 hours, laboratory 6 hours. Credit 5. Spring Quarter.

This course deals with classification, morphology, physiology and life histories of the invertebrates.

Required: General Science.

- 407 VARIATION, HEREDITY AND EVOLUTION. Class 4 hours, laboratory 3 hours. Credit 5. Spring Quarter.

Prerequisite: Zoology 213 or equivalent.

Required: General Science.

- 408 VERTEBRATE EMBRYOLOGY. Class 3 hours, laboratory 6 hours. Credit 5. Winter Quarter.

Prerequisite: Zoology 213 or equivalent.

Required: General Science and Veterinary Medicine.

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## DEPARTMENT OF BOTANY

CHAS. O. CHAMBERS, *Professor.*  
ROBT. STRATTON, *Assistant Professor.*

In an agricultural college, botany is a fundamental study. Agriculture has to do chiefly with plants, and botany deals with plants in their broadest aspect; their relations to soil, climate and culture. It deals with the origin and distribution of plants in general; the origin and improvement of our cultivated plants; the laws of breeding and selection by which they have been brought to a higher state of perfection.

Plant physiology aims to show the relation of plant-life to chemistry and biological laws. Plant pathology acquaints us with the chief diseases which threaten our crops and play havoc in orchard, field and garden.

This department, located on the third floor of Morrill Hall, has classroom and laboratories well equipped to accommodate classes in all lines—microscopes, microtomes and reagents for class-work, charts and balopticon for lecture-room. An extensive herbarium of native Oklahoma species is being constantly increased.

The aim and purpose is to afford:

1. General culture and acquaintance with plant life.
2. A basis for agricultural and horticultural studies.
3. Training for those who expect to teach botany or agriculture in secondary schools.

## SUBJECTS

- 211 AGRICULTURAL BOTANY. Class 3 hours, laboratory 4 hours. Credit  $4\frac{1}{3}$ .

Required of all agricultural students.

Fundamental principles of botany, with emphasis on the practical application of these principles.

Text: "Botany for Agricultural Students," Martin.

212 AGRICULTURAL BOTANY. Class 3 hours, laboratory 4 hours. Credit 4½.

Required of all agricultural students.

A continuation of Botany 211 with a survey of the plant groups in which the feed and food plants are found.

Text: Same as for Botany 211.

214 SYSTEMATIC BOTANY. Class 2 hours, laboratory 6 hours. Credit 4.

A taxonomic study of flowering plants.

Text: "Manual Botany," Gray (Seventh Edition).

310 GENERAL BOTANY. Class 3 hours, laboratory 6 hours. Credit 5.

Required in general science course.

The principles of plant structure studied from the standpoint of function; an introduction to physiology, genetics and ecology.

Text: "College Botany," Gager.

311 GENERAL BOTANY. Class 3 hours, laboratory 6 hours. Credit 5.

General morphology of the principal natural groups of plants from the standpoint of evolution from the lower to high forms, their structure, habits and relationships; an introduction of systematic botany.

Text: "College Botany," Gager.

313 GENETICS. Class 4 hours. Credit 4.

A study of the principles of variation, selection, heredity, and their application to animal and plant breeding.

Text: "Genetics," Walter.

314 PLANT PHYSIOLOGY. Class 3 hours, laboratory 3 hours. Credit 4.

Required in horticulture and general science.

A study of the vital progress in the higher plants.

Text: "Plant Physiology," Duggar.

315 PATHOLOGY. Class 3 hours, laboratory 6 hours. Credit 5.

A study of fungus diseases, both host and parasite.

Text: "Fungous Diseases of Plants," Duggar.

420 TEACHING OF BOTANY. Class 1 hour. Credit 1.

For those who expect to teach botany.

421 ADVANCED SYSTEMATIC BOTANY. Class 2 hours, laboratory 6 hours. Credit 4.

Prerequisite: Bot. 211.

A continuation of 214, with special emphasis on economic groups.

Text: "Manual of Botany," Gray (Seventh Edition).

## DEPARTMENT OF CHEMISTRY

\*HILTON I. JONES, *Professor.*  
 W. B. PARKS, *Professor.*  
 ROBERT DuBOIS, *Associate Professor.*  
 CHARLES L. NICKOLLS, *Assistant Professor.*  
 S. R. WOOD, *Instructor.*

The purpose of the instruction in the Department of Chemistry is four-fold:

1. To meet the present demand for chemical engineers and trained analysts, and to lay a broad foundation for graduate study and a career in chemistry.
2. To prepare teachers of chemistry for the secondary schools.
3. To offer such courses in chemistry as are required by the various schools of the College.
4. To give a comprehension and appreciation of the scientific method and those fundamental processes so essential to any understanding of the phenomena of nature and the progress of human industry in order that the study may be worth while if simply taken for its cultural value.

The Department of Chemistry is housed in a new, modern laboratory erected and furnished by the Board of Agriculture. This furnishes approximately 14,000 square feet of floor space, providing lecture auditorium, small classrooms, separate laboratories for each of the chief branches of chemistry; library, storerooms, offices, rooms for research, and all the appurtenances found in the best modern laboratories.

## SUBJECTS

- 106 GENERAL INORGANIC CHEMISTRY. Fall Quarter. Class 3 hours, laboratory 3 hours. Credit 4.

A course dealing with the fundamental principles of Chemistry. Lectures, written exercises and laboratory work.

General Inorganic Chemistry is required of all Freshmen and is a prerequisite for all other courses in this department.

Note: Students who have received entrance credit for high school chemistry should enroll in Chemistry 109.

- 107 GENERAL INORGANIC CHEMISTRY. Winter Quarter. Class 3 hours, laboratory 3 hours. Credit 4.

A continuation of 106.

- 108 GENERAL INORGANIC CHEMISTRY. Spring Quarter. Class 3 hours, laboratory 3 hours. Credit 4.

A continuation of 107.

The last eight weeks are devoted to qualitative analysis.

\*On leave of absence.

109 INORGANIC CHEMISTRY. Fall Quarter. Class 3 hours, laboratory 3 hours. Credit 4.

Prerequisite: One unit of entrance credit in Chemistry.

A course in General Chemistry for students who have had one year of high school chemistry.

Note: Students whose preparation proves to be inadequate for continuing this course will be required to change their registration to Chemistry 106.

110 INORGANIC CHEMISTRY. Winter Quarter. Class 3 hours, laboratory 3 hours. Credit 4.

A continuation of 109.

111 INORGANIC CHEMISTRY. Spring Quarter. Class 3 hours, laboratory 3 hours. Credit 4.

A continuation of 110.

The last eight weeks of this work are devoted to qualitative analysis.

218 QUALITATIVE ANALYSIS. Fall Quarter. Class 3 hours, laboratory 6 hours. Credit 5.

Prerequisite: Chemistry 108 or 111.

Required of Sophomores in the courses in General and Exact Science in the School of Science and Literature and in the course in Chemical Engineering. A course in both acid and basic analysis with special emphasis placed upon the industrial phases and fundamental theories underlying the work. Lectures, written exercises and laboratory work.

219 ELEMENTARY ORGANIC CHEMISTRY. Fall Quarter. Class 3 hours, laboratory 3 hours. Credit 4.

Required of all Sophomores in the School of Agriculture.

A course dealing with the chief types of organic compounds and their relation to food and feed stuffs. Lectures, written exercises and laboratory work.

220 AGRICULTURAL QUANTITATIVE ANALYSIS. Winter Quarter. Class 2 hours, laboratory 6 hours. Credit 4.

Prerequisite: General Inorganic Chemistry, or equivalent.

Required of all Sophomores in the School of Agriculture. An elementary study of the simpler quantitative methods, both gravimetric and volumetric. The preparation of standard solutions and similar work. Lectures, reports and laboratory work.

221 GENERAL QUANTITATIVE ANALYSIS. Winter Quarter. Class 2 hours, laboratory 9 hours. Credit 5.

Prerequisite: General Inorganic Chemistry and Qualitative Analysis.

Required of Sophomores in the courses in General and Exact Science in the School of Science and Literature and in the course in Chemical Engineering. A general study of the fundamental analytical methods both gravimetric and volumetric.

222 GENERAL QUANTITATIVE ANALYSIS. Spring Quarter. Class 2 hours, laboratory 9 hours. Credit 5.

A continuation of Chemistry 221.

224 HOUSEHOLD ORGANIC CHEMISTRY. Fall Term. Class 3 hours, laboratory 3 hours. Credit 4.

Prerequisite: General Chemistry.

Required of all Sophomores in the School of Home Economics.

A general survey of the simpler principles of Organic Chemistry with special reference to the application to foods and human physiology.

- 225 ELEMENTARY TECHNICAL ANALYSIS. Fall Quarter. Class hour, laboratory 3 hours. Credit 2.

Required of Civil, Electrical and Mechanical Engineers.

This course deals with the principles of fuel analysis, water analysis and boiler feed water treatment, analysis of boiler materials, gas analysis, analysis of lubricants, and road materials.

- 226 ELEMENTARY TECHNICAL ANALYSIS. Winter Quarter. Class hour, laboratory 3 hours. Credit 2.

A continuation of Chemistry 225.

- 227 ELEMENTARY TECHNICAL ANALYSIS. Spring Quarter. Class hour, laboratory 3 hours. Credit 2.

A continuation of Chemistry 226.

- 330 GENERAL ORGANIC CHEMISTRY. Fall Quarter. Class 3 hours, laboratory 6 hours. Credit 5.

Prerequisite: General Inorganic Chemistry, Qualitative and Quantitative Analysis.

Required of Juniors in the courses in General and Exact Science in the School of Science and Literature, and in the course of Chemical Engineering.

A scientific treatment of the compounds of carbon together with appropriate discussions of the theories of reactions. The laboratory work includes a study of the synthesis and analysis of a large number of carbon compounds of interest in the trades and industries, including dye stuffs, perfumes and drugs.

- 331 GENERAL ORGANIC CHEMISTRY. Winter Quarter. Class 3 hours, laboratory 6 hours. Credit 5.

A continuation of 330.

- 332 GENERAL ORGANIC CHEMISTRY. Spring Quarter. Class 3 hours, laboratory 6 hours. Credit 5.

A continuation of 331.

- 333 ELEMENTARY GEOLOGY. Fall Quarter. Class 3 hours. Credit 3.

Prerequisite: General Chemistry.

Required of Juniors in Chemical and Civil Engineering.

An introductory course including an elementary study of the materials of the earth's crust and the manner of their occurrence. The chemical and mechanical changes brought about by geological agencies and the surface features to which they give rise.

- 334 DETERMINATE MINEROLOGY AND BLOWPIPE ANALYSIS. Spring Quarter. Class 1 hour, laboratory 6 hours. Credit 3.

Prerequisite: Qualitative Analysis.

Required of Juniors in the Department of Civil and Chemical Engineering.

A study of the physical properties of typical mineral species, and of the dry reactions of the elements with their application to the identification of unknown minerals.

- 335 PETROLEUM TECHNOLOGY. Winter Quarter. Class 3 hours, laboratory 6 hours. Credit 5.

Prerequisite: General Chemistry, Qualitative and Quantitative Analysis.

A study of the origin, occurrence and properties of petroleum and the laboratory methods for the estimation of the value of crude oil and the products obtained by refining it.

- 430 PHYSIOLOGICAL CHEMISTRY. Fall Quarter. Class 3 hours, laboratory 4 hours. Credit 4 $\frac{1}{3}$ .

Prerequisite: Qualitative, Quantitative and Organic Chemistry.

Elective for Juniors and Seniors in the School of Science and Literature and offered to all other students prepared to take the work.

A study of the synthesis and analytical reactions that accompany the physiological changes in plants and animals. The chemical properties of foods and body substances and their specific characteristics; the behavior of enzymes and their functions; the changes that take place in digestion, assimilation and elimination.

431 PHYSIOLOGICAL CHEMISTRY. Winter Quarter. Class 3 hours, laboratory 4 hours. Credit  $4\frac{1}{3}$ .

A continuation of Chemistry 430.

432 PHYSIOLOGICAL CHEMISTRY. Spring Quarter. Class 3 hours, laboratory 4 hours. Credit  $4\frac{1}{3}$ .

A continuation of Chemistry 431.

433 PHYSICAL CHEMISTRY. Fall Quarter. Class 3 hours, laboratory 6 hours. Credit 5.

Prerequisite: General Chemistry, Analytical Chemistry, College Physics and Calculus.

Required of Seniors in the School of Chemical Engineering and open to all others qualified to take the work.

434 PHYSICAL CHEMISTRY. Winter Quarter. Class 3 hours, laboratory 6 hours. Credit 5.

A continuation of 433.

435 PHYSICAL CHEMISTRY. Spring Quarter. Class 3 hours, laboratory 6 hours. Credit 5.

A continuation of 434.

436 INDUSTRIAL CHEMISTRY. Class 3 hours, laboratory 6 hours. Credit 5.

Prerequisite: General Chemistry, Qualitative and Quantitative Analysis and General Organic Chemistry.

Required of Seniors in Chemical Engineering and offered to all having the necessary preparation.

A course dealing with the application of chemistry to the problems of manufacture. Laboratory practice in the analyses of both raw materials and factory products.

437 INDUSTRIAL CHEMISTRY. Winter Quarter. Class 3 hours, laboratory 6 hours. Credit 5.

A continuation of 436.

438 INDUSTRIAL CHEMISTRY. Spring Quarter. Class 3 hours, laboratory 6 hours. Credit 5.

A continuation of 437.

439 SPECIAL METHODS IN QUANTITATIVE ANALYSIS. Fall Quarter. Class 1 hour, laboratory 6 hours. Credit 3.

Prerequisite: Analytical and General Chemistry.

Elective for Juniors and Seniors in the School of Science and Literature and required of all students in Chemical Engineering. Entrance for others to this course is only upon personal arrangement with the professor in charge.

A course presenting selected technical methods employed in:

(a) Gas Analysis

(b) Iron and Steel Analysis

(c) Fuel Analysis

- (d) Wet and Fire Assay
- (e) Water Analysis

440 SPECIAL METHODS IN QUANTITATIVE ANALYSIS. Winter Quarter. Class 1 hour, laboratory 6 hours. Credit 3.

A continuation of 439.

441 SPECIAL METHODS IN QUANTITATIVE ANALYSIS. Spring Quarter. Class 1 hour, laboratory 6 hours. Credit 3.

A continuation of 440.

442 FOOD ANALYSIS. Class 2 hours, laboratory 9 hours. Credit 5.

An advanced course in food analysis giving practice in the methods generally employed in determining character, purity and nutritive value of the common food materials. This course is designed to illustrate the manner of attacking the chemical problems which arise in connection with federal, state and municipal food inspection and control.

Open only to students qualified to take the work and upon special arrangement with the professor in charge.

443 TEACHING OF CHEMISTRY. Class 2 hours. Credit 2.

Elective for Seniors in the course in Exact Science in the School of Science and Literature and for all others who have sufficient knowledge of the subject matter under discussion.

444 JOURNAL SEMINAR. Fall Quarter. Conference 1 hour. Credit 1.

Required of all Seniors in Chemical Engineering and other graduate students.

All members of the staff are expected to attend.

Reports on recent articles in American and foreign magazines and discussions of chemical advances.

445 JOURNAL SEMINAR. Winter Quarter. Conference 1 hour. Credit 1.

Continuation of 444.

446 JOURNAL SEMINAR. Spring Quarter. Conference 1 hour. Credit 1.

Continuation of 445.

460 MASTERS RESEARCH AND THESIS. Conference 1 hour, laboratory 10 to 20 hours. Credit in accordance with the amount of work done.

The work here indicated is of the nature of investigations, chiefly experimental with the necessary meetings and conferences. It is intended to familiarize the student with the methods used in independent work with an appreciation of the aims and objects of work in Chemistry.

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## DEPARTMENT OF ART

DAISY D. McCOOL, *Acting Director.*  
MABEL POLK, *Instructor.*

The aim of the Department of Art is to give training necessary for use in the practicum of the College.

Completed projects in art work that meet a certain standard of excellence shall be placed by students at the disposal of the institution for a period of one year.

The growth of the Department has added equipment. Two

kilns for use in firing and glazing china and pottery have been installed and are in use.

*SUBJECTS*

114 WORK IN REPRESENTATION. Fall, Winter and Spring Quarters. Practice 3 hours. Credit 1.

For students in Home Economics and Education.

Studies in light and dark and pencil outline, involving principles of perspective and composition.

115 REPRESENTATIVE DRAWING. Winter Quarter. Practice 3 hours. Credit 1.

Prerequisite: Art 114.

Lettering, theory of color design, applied or unapplied.

116 DESIGN. Winter and Spring Quarters. Practice 3 hours. Credit 1.

Prerequisite: Art 115.

Design applied to useful objects.

117 ART APPRECIATION. Fall Quarter. Class 1 hour. Credit 1.

Study of the development of art periods, as history of civilization; masterpieces in painting.

118 MASTERPIECES. Fall, Winter and Spring Quarters. Class 1 hour. Credit 1.

Prerequisite: Art 117.

Study of masterpieces of architecture and sculpture to arouse appreciation for the beautiful in nature and all arts.

119 TEACHING METHODS. Winter and Spring Quarters. Class 1 hour. Credit 1.

For students in Education.

Methods of presenting art in the public schools. History of art and appreciation.

120 INSTRUCTION METHODS. Winter and Spring Quarters. Practice 3 hours. Credit 1.

Prerequisite: Art 119.

Methods of presenting art in the public schools. Includes applied design, poster design, handicrafts, illustration, study of pictures and interiors.

121 FREEHAND DRAWING. Fall, Winter and Spring Quarters. Practice 6 hours. Credit 2.

Required of Science and Literature students.

Freehand drawing and perspective, color, design; history of art and appreciation.

123 ADVANCED FREEHAND DRAWING. Practice 6 hours. Credit 2.

Prerequisite: Art 114 or 121.

124 ADVANCED FREEHAND DRAWING. Practice 6 hours. Credit 2.

Prerequisite: Art 123.

Drawing in tonic value, composition and technical expression.

210 WATER COLOR. Fall and Spring Quarters. Practice 6 hours. Credit 2.

Prerequisite: Art 114 or 121.

Still life studies.

- 211 APPLIED DESIGN. Fall and Winter Quarters. Practice 6 hours. Credit 2.  
Prerequisite: Art 114 or 121.  
Selection of subjects from leather tooling, enamel painting, parchment shade making, pottery, basketry, gesso and batik.
- 212 POTTERY. Winter and Spring Quarters. Practice 6 hours. Credit 2.  
Prerequisite: 114 or 121.  
Study of form and construction with clay, making objects such as vases, bowls and jars.
- 224 FREEHAND SKETCHING. Practice 6 hours. Credit 2.  
Prerequisite: Art 124.  
Practice in pen, pencil, wash and pastel; technical methods in sketching from still life and figure.
- 225 FREEHAND SKETCHING. Practice 6 hours. Credit 2.  
Prerequisite: Art 224 .  
Freehand sketching and pictorial representation.
- 226 THEORY AND PRACTICE OF TEACHING ART. Practice 3 hours. Credit 1.  
Prerequisite: Art 225.
- 227 THEORY AND PRACTICE OF TEACHING ART. Practice 3 hours. Credit 1.  
Prerequisite: Art 226 .
- 228 THEORY AND PRACTICE OF TEACHING ART. Practice 3 hours. Credit 1.  
Prerequisite: Art 227.
- 229 LETTERING. Practice 3 hours. Credit 1.  
Study of different types of lettering.
- 230 MECHANICAL DRAWING.  
Simple mechanical design problems and working drawings.
- 312 OIL PAINTING. Fall and Spring Quarters. Practice 6 hours. Credit 2.  
Prerequisite: Art 114 or 121.  
Still life studies—landscape.
- 313 ADVANCED DESIGN. Fall Quarter. Practice 6 hours. Credit 2.  
Prerequisite: Art 114 or 121.
- 314 COMMERCIAL ART. Winter and Spring Quarters. Practice 6 hours. Credit 2.  
Prerequisite: Art 114 or 121.  
Poster design and commercial composition.
- 416 CHINA PAINTING. Fall and Winter Quarters. Practice 6 hours. Credit 2.  
Prerequisite: Art 114 or 121.  
Plain design, conventional and semi-conventional.
- 417 CHINA PAINTING. Fall, Winter and Spring Quarters. Practice 6 hours. Credit 2.  
Prerequisite: Art 416.  
Enameling of satsuma and etching.

## DEPARTMENT OF ENGLISH

W. P. POWELL, *Professor.*  
GRACE MOUNTCASTLE, *Associate Professor.*  
AGNES BERRIGAN, *Associate Professor.*  
HARRIET RUBY ENSWORTH, *Instructor.*

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Courses in English are planned to give such training in clear thinking and correct expression as will increase the chances of success in any occupation. Some courses are made specially practical through definite correlation with certain professions. Cultural as well as practical aims give direction to the work. Enlargement of experience and nurture of aspiration, are sought through the study of literature. The wide range of courses presents opportunity to those whose chief interests are literary and who desire to specialize in literary subjects.

### SUBJECTS

130 COLLEGE. Class 3 hours. Credit 3.

This course includes (1) a thorough drill in the fundamentals of composition, vocabulary work, sentence structure, paragraph structure; (2) Daily and fortnightly themes with careful revision of themes and conference with instructors. Work is closely correlated with work in technical schools.

131 COLLEGE. Class 3 hours. Credit 3.

Prerequisite: Eng. 130.

This course is a continuation of 130. It includes work in the theory of practical description and narration, daily theme work, and the study of models. This work also is closely correlated with work in technical schools.

132 COLLEGE. Class 3 hours. Credit 3.

Prerequisite: Eng. 130, 131.

This course is designed to give freshmen beginning work in the appreciation of literature. Outside reading in the drama and the novel and class work in types of great literature are required. Frequent written work also is demanded in the course.

### SPECIAL FRESHMAN ENGLISH.

Freshmen on entering the English classes will be given an examination to test their fitness to begin college work. Those falling below the standard set will be put into a special Freshman class until their work shows the necessary improvement.

224 ADVANCED COMPOSITION. Class 3 hours. Credit 3.

Prerequisite: Eng. 130, 131, 132.

In this course the student is given advanced work in theory and practice of exposition. Subjects for required themes are taken largely from students' particular field of work. Time is given to careful study of models of exposition.

225 ADVANCED COMPOSITION. Class 3 hours. Credit 3.

Prerequisite: Eng. 130, 131, 132.

This course gives advanced work in theory and practice of descriptive and narrative writing with supplementary work in the study of carefully chosen models.

**226 TECHNICAL WRITING.** Class 3 hours. Credit 3.

Prerequisite: Eng. 130, 131, 132.

This is an advanced course in composition adapted to the needs and interests of engineering students.

**227 BUSINESS ENGLISH.** Class 3 hours. Credit 3.

Prerequisite: Eng. 130, 131, 132.

Attention is given in this course to the principles of effectiveness in business correspondence and special sales letters. It comprises also a thorough review of business forms and general business writing.

**228 NEWS WRITING.** Class 3 hours. Credit 3.

Prerequisite: Eng. 130, 131, 132.

This course includes a study of the organization of newspapers, the fundamentals of news stories, and practice in writing various kinds of news stories. Actual work in reporting is required.

**229 NEWS WRITING.** Class 3 hours. Credit 3.

Prerequisite: Eng. 228.

This is a continuation of 228, requiring the same kind of practice work, and in addition, some practice with the less conventional forms. Editing, headlines and style rules are studied, also proof reading and making up the paper.

**230 FEATURE WRITING.** Class 3 hours. Credit 3.

Prerequisite: Eng. 229.

The principles underlying the feature story are studied in this course. The work is adapted to the needs and interests of students in particular departments. The demands of newspapers and magazines for writings of this character are analyzed.

**231 ENGLISH LITERATURE.** Class 5 hours. Credit 5.

Prerequisite: Eng. 130, 131, 132.

This is a survey course designed to give a knowledge of the field of English Literature from the Anglo-Saxon Period to the Romantic Period. Wide and appreciative reading of different types of literature is expected.

**232 ENGLISH LITERATURE.** Class 4 hours. Credit 4.

This course is a continuation of 231 English Literature. It covers the field of English Literature from the Romantic Period to the present.

**233 CURRENT LITERATURE.** Class 3 hours. Credit 3.

Prerequisite: Eng. 231, 232.

The best of recent writings in prose fiction are studied in this course.

**234 CURRENT LITERATURE.** Class 3 hours. Credit 3.

Prerequisite: Eng. 231, 232.

In this course particular attention is given to modern verse, with some study of essays and other forms.

**235 ESSAYS.** Class 3 hours. Credit 3.

Effort is made in this course to give a knowledge of some of the most noted essays by English authors. The work is intended to contribute to mastery of language and to general culture. Much writing is required.

**236 AGRICULTURAL JOURNALISM.** Class 3 hours. Credit 3.

This course includes the study of the principles of the feature story with special reference to their application to writing for agricultural journals. Material for practice work is based upon work in experiment stations and the best agricultural papers will be studied for models.

237 HOME ECONOMICS. JOURNALISM. Class 3 hours. Credit 3.

This course is adapted to needs of students in Home Economics. The principles of journalistic writing are applied to such subject matter as cooking, nursing, nutrition, sewing and lunch room work.

324 EDITORIAL WRITING. Class 3 hours. Credit 3.

Prerequisite: Eng. 229.

This course deals with the writing of editorials suitable for farm papers, trade papers, and newspapers. Well written editorials of all types are studied as models, and much original work in writing is required. The work will be correlated with subjects in which students are specializing.

325 MAGAZINE WRITING. Class 3 hours. Credit 3.

Prerequisite: Eng. 229.

In this course magazine articles are studied with a view to the discovery of principles of structure and style, and the gaining of facility in writing articles acceptable to editors of magazines.

326 CURRENT PERIODICALS. Class 3 hours. Credit 3.

Prerequisite: Eng. 229.

Current periodicals of various types are studied in this course. Characteristic material and the nature of the appeal are noted.

327 AMERICAN POETRY. Class 3 hours. Credit 3.

This course includes lectures on the background and the work of American poets from the colonial period to 1876. Emphasis is placed on work of major poets.

328 AMERICAN PROSE. Class 3 hours. Credit 3.

This course includes the work of the principal prose writers of American literature.

329 ENGLISH LANGUAGE. Class 3 hours. Credit 3.

This is a course in the structure of language and aims to advance and deepen the students' knowledge of grammar. Some attention is given to historical development of forms and to word study.

330 LITERARY APPRECIATION. Class 3 hours. Credit 3.

Effort is made in this course to give clear ideas concerning the nature and value of literature, points of view for its appreciation, and standards for judgment. The work is made concrete through discussion of definite literary selections of different types.

331 THE SHORT STORY. Class 3 hours. Credit 3.

The development of the short story as a type is studied; and some of the best short stories are read and studied.

332 MODERN DRAMA. Class 3 hours. Credit 3.

Prerequisite: Eng. 231, 232.

This course is designed to give students knowledge of the movements and writers in the field of the modern drama. Emphasis is placed upon the work of Ibsen. English, French, Austrian, Russian, Scandinavian and Irish dramatists are included in the course.

424 CARLYLE AND RUSKIN. Class 5 hours. Credit 5.

This course includes the reading of the works of Carlyle and Ruskin. The most important works are studied in class.

## 425 THE VICTORIAN POETS. Class 5 hours. Credit 5.

Prerequisite: Eng. 231, 232.

In this course the poems of the chief poets of the Victorian Period are read, and intensive study is given to the poems of Tennyson and Browning.

## 426 THE ROMANTIC POETS. Class 5 hours. Credit 5.

Prerequisite: Eng. 231, 232.

The poems of Wordsworth, Coleridge, Byron, Shelly and Keats are studied. The course is supplemented by lectures and collateral readings tracing the rise and development of the Romantic Movement.

## 427 THE NOVEL. Class 5 hours. Credit 5.

Prerequisite: Eng. 231, 232.

This course comprises a study of the historical development of the English novel and its place in modern literature. Lectures, assigned reading, and reports from the work.

## 428 THE NOVEL. Class 4 hours. Credit 4.

Prerequisite: Eng. 231, 232.

This course is a continuation of English 427. A review of essential elements in the novel is given and reading of representative modern novels is continued.

## 429 MASTERPIECES. Class 3 hours. Credit 3.

This course consists of the study of selected masterpieces of all nations.

## 430 MASTERPIECES. Class 3 hours. Credit 3.

This course consists of masterpieces selected from the dramatic writings of all nations.

## 431 SHAKESPEARE. Class 3 hours. Credit 3.

Prerequisite: Eng. 231, 232.

The comedies, historical plays and early tragedies are studied. On a few plays the class work is intensive. On others reports and conferences are required.

## 432 SHAKESPEARE. Class 3 hours. Credit 3.

Prerequisite: Eng. 231, 232.

Tragedies, sonnets, and later plays are studied in this course. Intensive study of the great tragedies and *The Tempest* is made in class. Outside reading and reports are required.

## 433 THE ENGLISH BIBLE. Class 3 hours. Credit 3.

Prerequisite: Eng. 231, 232.

This course is designed to give students a knowledge of the literary beauty of the English Bible, and an understanding and appreciation of the literary forms found in it. Emphasis is placed upon the lyric poetry.

## 434 TEACHERS' COURSE. Class 3 hours. Credit 3.

This course is intended for those who wish a special preparation for teaching English in high schools.

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## DEPARTMENT OF HISTORY

A. S. HIATT, *Professor.*  
J. H. CALDWELL, *Assistant Professor.*

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The study of history has two distinct but not incompatible aims. One of these is personal culture, the other is practical vocational

value. Each of these standards is sought in both method and matter in different proportions to suit the various courses of the Agricultural and Mechanical College. The number of courses offered is limited by the technological character of the curricula. The newer conceptions of history prevail which treat the subject more for thought than for memory facts, minimizing the details of wars, and stress ethical, political and industrial features. Special adaptations are made to reinforce the College work in agriculture and home economics. The College library contains many valuable sets of reference works, which are being added to from time to time.

In connection with the history work an International Relations Club has been organized to study the larger problems of world interest. Many books, maps and much source material in form of treaties, reports of conferences, etc., are being collected that will be of great value to the department.

### *SUBJECTS*

106 MODERN EUROPEAN HISTORY. Class 3 hours. Credit 3. Fall Quarter.

Required: Commerce and Marketing students, freshman year.

Scope: A brief survey of the political and economic history of Europe from the Congress of Vienna to the present time. Special attention will be given to the growth of democracy and forms of constitutional government, the new imperialism and the causes of the World War.

107 INDUSTRIAL HISTORY OF ENGLAND. Class 3 hours. Credit 3. Winter Quarter.

Required: Commerce and Marketing students, freshman year.

Scope: The course covers a study of the industrial and economic life of England from earliest times to the present. Such topics as feudalism, mercantilism, the rise of merchant and craft guilds, the Industrial Revolution, the factory system, the development of collective buying and labor unionism, and the organization of combinations and monopolies, in fact, all great movements that have had a bearing on the economic development and industrial achievement of the English people will be studied.

108 INDUSTRIAL HISTORY OF THE UNITED STATES. Class 3 hours. Credit 3. Spring Quarter.

Required: Commerce and Marketing students, freshman year.

Scope: This course is a general survey of the development of industrial life in America from colonial days to the present. The American aspects of the Industrial Revolution in England, and the extension of the factory system to America are considered. After a brief study of the colonial period, the course proceeds with a survey of such national problems as the tariff policy, internal improvements, commercial expansion, currency and banking problems, the occupation and development of the great West, domestic and foreign trade problems, labor problems, industrial combinations, the development of transportation, governmental regulation of business, and finally the economic aspects of the World War.

**210 HISTORY OF ENGLAND.** Class 5 hours. Credit 5. Winter Quarter.

Required: General literature course in School of Science and Literature, history and literature course in School of Education.

Scope: Physical features and resources of the British Isles; their strategic position. Rise of the English national form. Anglo-Saxon institutions, advancement in democracy as a basis of modern institutions. The beginnings of the English constitution. The course extends to the accession of the Orange-Stuarts.

**211. HISTORY OF ENGLAND.** Class 4 hours. Credit 4. Spring Quarter.

Continuation of Hist. 210, required in the same course.

Scope: Beginning and development of the cabinet system. British colonial, naval and commercial growth. Recent British social legislation. Church. Background of English literature. The War of the Nations. The British Empire and the reconstruction of the world.

**311 HISTORY OF THE UNITED STATES.** Class 5 hours. Credit 5. Winter Quarter.

Prerequisite: American History 31 and 32 (government), Secondary School, or its equivalent.

Required: General Literature course in School of Science and Literature, history and literature course in School of Education.

Scope: Brief survey of fifteenth century Europe as a background for geographical discovery. Colonial period as preparatory to nationality. Steps toward union, the dominant theme in the Revolution; critical period, and adoption and operation of the constitution. Social, industrial and educational features given due but secondary consideration. Course extends to presidency of Andrew Jackson.

**312 HISTORY OF THE UNITED STATES.** Class 4 hours. Credit 4. Spring Quarter.

Continuation of Hist. 311, required in same courses, with same prerequisites.

Scope: Political history basic. Financial and social phases not slighted. Enlargement of governmental activities, state and national, emphasized as characteristic of recent years.

Aim: To give insight into present-day problems. Current history utilized to give reality to past and to keep pace with the present.

**313 LATIN AMERICAN HISTORY.** Class 5 hours. Credit 5. Spring Quarter.

Prerequisite: American History in Secondary School.

Should not be taken before 311 and 312. Department may grant exception in part.

Scope: Brief survey of Spanish institutions and early history. Exploration and discovery. Spanish and Portuguese colonial methods and their effect upon the social and industrial life of Latin America. The era of revolution. The Caudillo period. National democracy in South America, Central America and Mexico and such movements as Pan-Americanism, Pan-Latin-Americanism and Pan-Hispanism. The outlook for the future.

**410 MODERN EUROPE.** Class 5 hours. Credit 5. Fall Quarter.

Prerequisite: Ancient History 21 and Modern History 22 in Secondary School.

Should not be taken before 210, 211, 311, 312. Department may grant exception in part.

Required: General Literature course in School of Science and Literature, history and literature course in School of Education.

Scope: The course covers the period from 1500 to 1815 with a sketch

of some of the earlier large events. The rise of the nations, the Papacy, Feudalism, Renaissance and Reformation, the French Revolution.

**411 MODERN EUROPE.** Class 5 hours. Credit 5. Winter Quarter.

Continuation of Hist. 410, required in same courses, with same prerequisites.

Scope: Political and social development. A study of the complex conditions leading to the War of the Nations. Time is given to questions that bulk large, such as nationalism, democracy and internationalism.

**412 GOVERNMENT AND POLITICAL METHODS.** Class 4 hours. Credit 4. Fall Quarter.

Prerequisite: Hist. 311 and 312 in Science and Literature and Education courses.

Required: School of Commerce and Marketing, senior year.

Elective: Science and Literature and Education courses.

Scope: The object is to teach the actual methods of self government; to make an impartial study of the methods by which political parties organize and conduct their campaigns, along with the improvements that might be made in party methods and in actual government.

**413 POLITICAL THEORY.** Class 5 hours. Credit 5. Winter Quarter.

Required: School of Commerce and Marketing, senior year.

Elective: Science and Literature and Education courses.

Scope: A survey of the forms through which governments have evolved, of the principles of government, and of the actual practices of our American state and national governments.

**414 CONTEMPORARY WORLD HISTORY.** Class 5 hours. Credit 5. Spring Quarter.

Prerequisite: Modern Europe 410 and 411. Department may grant exception in part.

Scope: Conditions and events leading up to the World War. The War of the Nations. The Versailles Conference and the League of Nations. The struggle of the world for economic reconstruction. The question of self-determination and the desire of subject peoples for political independence. The Washington Conference and its bearing on the far eastern question. The aim of the course will be to keep abreast of world movements.

**415 INDUSTRIAL HISTORY OF THE UNITED STATES.** Class 5 hours. Credit 5. Fall Quarter.

Required: General Science course in School of Science and Literature.

Scope: Economic side of national growth emphasized rather than political. History of different industries, periods and movements, leading to survey of conditions of today. Adapted to industrial and vocational courses.

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## DEPARTMENT OF MODERN LANGUAGES

ALMON AI ARNOLD, *Professor.*  
MARY ELEANOR LOCKWOOD, *Instructor.*

The College offers a four-year course in modern languages.

The Secondary School of Oklahoma A. and M. College requires one year of some foreign language of all students. Students who are preparing for the School of Engineering must take two years of a foreign language.

The student is allowed to elect that course for which he is prepared.

As to which courses are required and which elective, see the courses of study outlined for each school.

### SUBJECTS

#### SPANISH

106 ELEMENTARY. Class 3 hours. Credit 3.

Careful treatment of the pronunciation, acquirement of a practical class-room vocabulary; the present tense of regular and irregular verbs.

Text: "Beginners' Spanish," Hannsler and Parmenter.

107 ELEMENTARY. Class 3 hours. Credit 3.

Emphasis on pronouns, reflexive verbs, and mastery of the preterite, future, and perfect tenses.

Text: Same as for 106.

108 ELEMENTARY. Class 3 hours. Credit 3.

Methods of expressing commands and a thorough study of the use of the subjunctive mode. Radical changing verbs and compound tenses. Study of the passive voice and its substitutes.

Text: Same as for 107. An easy reader will be used.

206 SECOND YEAR. Class 5 hours. Credit 5.

Prerequisite: Spanish 106, 107, 108, or equivalent.

Advanced prose composition; reading of standard authors.

Text: "Composition," Broomhall; "Spanish Humor," Morley.

207 SECOND YEAR. Class 5 hours. Credit 5.

Prerequisite: Spanish 206.

Continuation of course 206.

Text: "Spoken Spanish," Broomhall; Spanish magazines, and Alarcon's "El Capitain Veneno."

306 THIRD YEAR. Class 4 hours. Credit 4.

Prerequisite: Spanish 206, 207, or equivalent.

Composition, conversaton and industrial Spanish.

Texts vary: "Industrial Spanish," Sparkman.

307 THIRD YEAR. Class 4 hours. Credit 4.

Prerequisite: Spanish 306.

Continuation of course 306 including, in addition, a course in Spanish correspondence.

Texts vary: "Spanish Commercial Correspondence," Whittem & Andrade.

406 ADVANCED. Class 4 hours. Credit 4.

Prerequisite: Spanish 306, 307, or equivalent.

Reading of representative modern dramatists. Oral and written reports in Spanish. Intensive study of Spanish pronunciation, based on Navarro Tomas' "La Pronunciacion Espanola."

407 ADVANCED. Class 4 hours. Credit 4.

Prerequisite: Spanish 406.

Continuation of course 406. Class conducted in Spanish. Reading of representative modern novelists.

FRENCH

106 ELEMENTARY. Class 3 hours. Credit 3.

Essentials of French grammar; regular verbs. Careful training in pronunciation.

Text: Fraser and Squair's *Complete French Grammar*; reading of Bruce's "Lectures Faciles."

107 ELEMENTARY. Class 3 hours. Credit 3.

Prerequisite: French 106.

The more common irregular verbs. Acquirement of a classroom vocabulary.

Text: Same as for 106.

108 ELEMENTARY. Class 3 hours. Credit 3.

Prerequisite: French 106, 107, or equivalent.

Continuation of course 107. Reading of 150 to 200 pages of prose. Emphasis on irregular verbs, idioms, and translation of easy French at sight.

Text: Same as for 107, and Allen and Schoell's "French Life."

206 SECOND-YEAR FRENCH. Class 5 hours. Credit 5.

Prerequisite: French 108.

Prose composition, reading of standard authors.

Text: Carnahan's "Short French Review Grammar"; Merimee's "Colomba"; Labiche's "Le Voyage de M. Perrichon."

207 SECOND-YEAR FRENCH. Class 5 hours. Credit 5.

Prerequisite: French 206.

Continuation of course 206.

Text: Daudet's "La Belle Nivernaise"; Collateral readings; Sand's "La Mare au Diable," etc.

208 SCIENTIFIC FRENCH. Class 2 hours. Credit 2.

Prerequisite: French 108.

Text: Bowen's "Elementary Scientific Reader."

209 SCIENTIFIC FRENCH. Class 2 hours. Credit 2.

Continuation of course 208.

Text: French scientific magazines.

306 MOLIERE. Class 4 hours. Credit 4.

Prerequisite: French 207.

A careful study of the works of Moliere; collateral readings.

Text: "Le Bourgeois Gentilhomme," etc.

307 RACINE AND CORNEILLE. Class 4 hours. Credit 4.

Prerequisite: French 306.

A study of the tragedies of Racine and Corneille.

Text: Corneille's "La Cid"; "Horace," etc.

406 FRENCH DRAMA OF THE NINETEENTH CENTURY. Class 4 hours. Credit 4.

Prerequisite: French 307.

A study of the works of representative authors, such as Dumas, Augier, Hervieu.

Text: "La Question d'Argent," etc.

407 PHONETICS AND COMPOSITION. Class 4 hours. Credit 4.

Prerequisite: French 406.

Text: Gedde's "French Pronunciation"; Armstrong's "Syntax of the French Verb."

## GERMAN

## 106 ELEMENTARY COURSE. Class 5 hours. Credit 5.

Mastery of inflections and of the elements of syntax. Reading of easy narrative prose. Composition and conversation based on reading.

Text: Harris' German Lessons and Muller and Wenckebach's "Gluck Auf."

## 107 ELEMENTARY COURSE. Class 5 hours. Credit 5.

Prerequisite: Ger. 106.

Continuation of course 106.

Text: Harris' German Lessons and Storm's Immensee.

## 206 SECOND YEAR. Class 5 hours. Credit 5.

Prerequisite: Ger. 107.

The course is planned primarily to give students facility in reading scientific German. One hour will be devoted to composition.

Text: Zschokke's *Der Zerbrochene Krug*; Dippold's *Scientific German Reader*; Philip S. Allen's *German Composition*.

## 207 SECOND YEAR. Class 5 hours. Credit 5.

Prerequisite: German 206. Composition and conversation. Reading of about two hundred pages of prose.

Text: Same as above and German scientific magazines.

## 306 MASTERPIECES IN GERMAN LITERATURE. Class 4 hours. Credit 4.

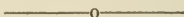
Prerequisite: German 207.

Oral and written reports in German on the works of the following authors: Lessing, "Minna von Barnhelm" and "Nathan der Weise"; Goethe, "Iphigenie auf Tauris" and "Egmont"; Schiller, "Wilhelm Tell" and "Die Jungfrau von Orleans."

## 307 MASTERPIECES IN GERMAN LITERATURE. Class 4 hours. Credit 4.

Prerequisite: German 306.

A continuation of course 306. Studies of the following works will be made: Goethe's "Hermann und Dorotea"; Schiller's "Das Lied von der Glocke"; Scheffel's "Der Trompeter von Sackkingen", and Hauptman's "Die Versunkene Glocke."



## DEPARTMENT OF ANCIENT LANGUAGES

JUDSON ALLEN TOLMAN, *Professor*.



The Department of Ancient Languages meets the required Latin demands of law schools, medical schools and the needs of prospective teachers of Latin in high schools, or those who desire Latin for the purpose of general culture.

## SUBJECTS

## 106 CAESAR. Class 5 hours. Credit 5. Fall Quarter.

Prerequisite: One year of Latin.

Two books of the Gallic War are read. Prose composition.

## 107 CAESAR. Class 4 hours. Credit 4. Winter Quarter.

Three books of Gallic War. Prose composition.

- 206 CICERO'S ORATIONS. Class 5 hours. Credit 5. Spring Quarter.  
Prerequisite: Latin 106 and 107, or its equivalent.
- 207 CICERO'S LETTERS AND ORATIONS. Class 4 hours. Credit 4.  
Fall Quarter.
- 306 VIRGIL AENEID. Class 4 hours. Credit 4. Winter Quarter.  
Prerequisite: Latin 106 and 107, or its equivalent.  
Three books will be read. Study of Latin.  
Poetry and Scansion.
- 307 VIRGIL AENEID (Continued). Class 4 hours. Credit 4. Spring Quarter.  
Ovid's Metamorphoses.
- 406 CICERO'S ESSAYS. Class 5 hours. Credit 5. Fall Quarter.  
Prerequisite: Latin 206.  
De Senectute and De Amicitia.  
Study of Roman Philosophy.
- 407 LIVY. Class 4 hours. Credit 4. Winter Quarter.  
Books I and II or XXI and XXII.
- 408 HORACE. Class 5 hours. Credit 5.  
Selected odes. Study of Roman poetry.
- 410 TEACHERS' COURSE IN LATIN. Class 5 hours. Credit 5. Fall Quarter.  
Prerequisite: Latin 106 and 107 or its equivalent.  
Study of teaching first year Latin. Syntax, pronunciation, cases, moods, etc.  
Elective: Education, Science and Literature.
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## DEPARTMENT OF MATHEMATICS

CARL GUNDERSEN, *Professor*.  
R. E. HARTSOCK, *Professor*.  
EDWARD McCARREL, *Assistant Professor*.

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Work in mathematics is required of all students in the School of Engineering and the School of Science and Literature, and the work is organized with a special view to the needs of these students. Courses 112, 113, 114 are required of both these classes of students, while 115, 116, 210, 211, 212, 310, 311 are required of Engineering students.

### SUBJECTS

- 112 COLLEGE ALGEBRA. Class 3 hours. Credit 3.  
Prerequisite: One and one-half years of algebra and one year of plane geometry.  
Review, theory of exponents; equations; variables and functions; logarithms.  
Text: Reitz and Crathorne.

## 113 COLLEGE ALGEBRA. Class 3 hours. Credit 3.

Prerequisite: Math. 112 and 114.

Mathematical induction; binomial theorem; progressions; complex numbers; limits; partial fractions.

Text: Reitz and Crathorne.

## 114 PLANE TRIGONOMETRY. Class 3 hours. Credit 3.

Prerequisite: One and one-half years of algebra and one year of plane geometry.

The development and use of trigonometric functions; relations between the functions; logarithms; solution of triangles; application to practical problems throughout the course.

Text: Ashton and Marsh.

## 115 ANALYTICS. Class 3 hours. Credit 3.

Prerequisite: Math. 113 and 114.

Coordinates; applications; the locus and the equation; the straight line.

Text: "Brief Course in Analytic Geometry," Tanner and Allen.

## 116 ANALYTICS. Class 3 hours. Credit 3.

Prerequisite: Math. 115.

The circle; polar coordinates; the equation of the second degree; analytical geometry of three dimensions.

Text: Same as 115.

## 210 CALCULUS. Class 3 hours. Credit 3.

Prerequisite: Math. 116.

Introduction to calculus; limits; derivatives; second derivatives; infinitesimals.

Text: "Calculus", March and Wolff.

## 211 CALCULUS. Class 3 hours. Credit 3.

Prerequisite: Math. 210.

Indeterminate forms; differentials; integrals; circular functions; experimental and logarithmic functions; maxima and minima.

Text: March and Wolff.

## 212 CALCULUS. Class 3 hours. Credit 3.

Prerequisite: Math. 211.

Polar coordinates; integrations; improper integrals; partial deriviations.

Text: March and Wolff.

## 213 SPHERICAL TRIGONOMETRY. Class 2 hours. Credit 2.

Prerequisite: Solid geometry and Math. 114.

Introduction; right and quadrantal triangles; oblique triangles.

Text: Ashton and Marsh.

## 214 ASTRONOMY. Class 3 hours. Credit 3.

Prerequisite: Math. 114.

The celestial sphere; reference lines and astronomical measurements; the solar system; laws of motion; evolution; stars; comets; nebulae; structure of the universe.

## 310 CALCULUS. Class 3 hours. Credit 3.

Prerequisite: Math. 212.

Successive integration; center of gravity; moment of inertia; curvature; envelopes.

Text: March and Wolff.

311 CALCULUS. Class 3 hours. Credit 3.

Prerequisite: Math. 310.

Taylor's and Maclaurin's theorem; exact differentials; differential equations.

Text: March and Wolff.

312 DIFFERENTIAL EQUATIONS. Class 3 hours. Credit 3.

Prerequisite: Math. 311.

Solution of differential equations of two variables.

Text: Murray.

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## DEPARTMENT OF PHYSICS

J. H. CLOUD, *Professor.*

E. W. SCHUHMAN, *Assistant Professor.*

LEONA SIEGLINGER, *Instructor.*

The laws of physics are used in all scientific investigation. Hence physics is the fundamental science. The courses offered below are designed to meet the needs of the following classes of students:

1. Those who want to study physics for its cultural value as a method of mental discipline.

2. Those who are preparing to teach, or to superintend the teaching of physics in secondary schools.

3. Those who wish to pursue the subject because of its intimate relation to all branches of engineering, technology and industrial science.

The instruction consists of lectures, recitations, tests and laboratory work. The lectures are fully illustrated with demonstration experiments. The laboratory work is all quantitative. Each experiment leads to a definite problem to be worked out and reported upon by the student. In the more advanced courses instruments of precision which are capable of giving accurate results are furnished.

## SUBJECTS

112 MECHANICS. Class 3 hours, laboratory 3 hours. Credit 4.

Elective for students in Commerce and Marketing in the Freshman class.

Prerequisite: A working knowledge of algebra and plane geometry.

Text: Cloud's "Principles of Physics."

113 HEAT AND ELECTRICITY. Class 3 hours, laboratory 3 hours. Credit 4.

Elective for students of Commerce and Marketing in the Freshman class.

Prerequisite: Physics 112.

Text: Cloud's "Principles of Physics."

- 114 **SOUND AND LIGHT.** Class 3 hours, laboratory 3 hours. Credit 4.  
Elective for students of Commerce and Marketing in the Freshman class.  
Prerequisite: Physics 112.
- 115 **MECHANICS.** Class 2 hours, laboratory 3 hours. Credit 3.  
Required of all students of engineering in the Freshman class.  
Prerequisite: Elementary algebra and plane geometry.  
Text: Cloud's "Principles and Physics."
- 116 **HEAT AND ELECTRICITY.** Class 2 hours, laboratory 3 hours. Credit 3.  
Required of all students of engineering in the Freshman class.  
Prerequisite: Physics 115.  
Text: Cloud's "Principles of Physics."
- 117 **SOUND AND LIGHT.** Class 2 hours, laboratory 3 hours. Credit 3.  
Required of all engineering students in the Freshman class.  
Prerequisite: Physics 116.  
Text: Cloud's "Principles of Physics."
- 121 **HOUSEHOLD PHYSICS.** Class 3 hours, laboratory 3 hours. Credit 4.  
Required of students in Home Economics.
- 206 **MECHANICS.** Class 3 hours, laboratory 3 hours. Credit 4.  
Required of all students of engineering in the Sophomore year.  
Prerequisite: Physics 115, 116, 117, or equivalent., and trigonometry.  
Text: Duff's "Textbook of Physics."
- 207 **SOUND AND ELECTRICITY.** Class 3 hours, laboratory 3 hours. Credit 4.  
Required of all students in engineering and exact science in the Sophomore year.  
Prerequisite: Physics 206.  
Text: Duff's "Textbook of Physics."
- 208 **HEAT AND LIGHT.** Class 3 hours, laboratory 3 hours. Credit 4.  
Required of all students of engineering and exact science in the Sophomore year.  
Prerequisite: Physics 206.  
Text: Duff's "Textbook of Physics."
- 330 **KINEMATICS AND KINETICS.** Class 4 hours, laboratory 3 hours. Credit 5.  
Required of students in exact science in Junior year.  
Prerequisite: Physics 206 and calculus.  
Text: Martin's Textbook of Mechanics Vol. II.
- 331 **THERMODYNAMICS.** Class 4 hours, laboratory 3 hours. Credit 5.  
Required of students in exact science in Junior year.  
Prerequisite: Physics 206 and calculus.
- 440 **ELECTRICITY.** Class 4 hours, laboratory 3 hours. Credit 5.  
Required of students of exact science in Senior year.  
Prerequisite: Physics 330 and differential equations.  
Text: To be selected.
- 441 **OPTICS.** Class 4 hours, laboratory 3 hours. Credit 5.  
Required of students of exact science in Senior year.  
Prerequisite: Physics 330 and differential equations.  
Text: To be selected.

- 442 TEACHERS' COURSE. Class 3 hours. Credit 3.  
Textbooks, laboratory manuals, methods of conducting the work, ordering apparatus. Selected topics.
- 443 POPULAR LECTURES. Class 1 hour. Credit 1.
- 444 PRESENT PROBLEMS OF PHYSICS. Class 2 hours. Credit 2.
- 445 ELECTRICAL MEASUREMENTS. Class 1 hour, laboratory 3 hours. Credit 2.  
Required of electrical engineers in the Senior year.  
Prerequisite: Physics 206 and Math. 210, 211, 212.  
Text: To be selected.
- 446 ELECTRICAL MEASUREMENTS. Class 1 hour, laboratory 3 hours. Credit 2.  
Required of electrical engineers in the Senior year.  
Prerequisite: Physics 445.  
Text: To be selected.
- 447 ELECTRICAL MEASUREMENTS. Class 1 hour, laboratory 3 hours. Credit 2.  
Continuation of 446.

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## DEPARTMENT OF SPEECH

DAVID TERRY MARTIN, *Professor.*

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The aim of this department is to make each student an intelligent reader and an effective speaker.

Students of speech are required to attend and to report upon certain public speaking contests and other public addresses given during the quarter, and are urged to join a literary society and to participate in some of the contests provided by the Oratorical Association.

The department has charge of the Amateur Dramatic Club. Its membership is open to students having ability along this line. The club stages several plays each year.

Members of the Dramatic Club may become eligible to Theta Alpha Phi Fraternity, a national dramatic society organized in 1919 by the A. and M. Dramatic Club.

Intercollegiate debaters and orators are privileged to become members of Pi Kappa Delta, a national forensic fraternity.

### SUBJECTS

- 130 ESSENTIALS OF PUBLIC SPEAKING. Class 3 hours. Credit 3.  
This is an elementary course. The fundamental principles of speech are emphasized through the composition and delivery of original speeches. A basis of self-criticism is effected enabling the student to continue improving his speech after completing the course.

131 ESSENTIALS OF PUBLIC SPEAKING. Class 2 hours. Credit 2.  
Continuation of 130.

230 ARGUMENTATION AND DEBATE. Class 3 hours. Credit 3.  
A study of the principles of argumentation. Analysis, evidence, proof, refutation and fallacies. Brief-drawing. Platform technique. Parliamentary drill.

Prerequisite: P. S. 130, or consent of instructor.

232 DRAMATICS. Class 3 hours. Credit 3.

Dramatic interpretation. Blocking and building dramatic scenes, stage deportment and stage business. Costuming. Make-up. Scenery. Choosing, directing and rehearsing.

This course should be of interest to students who take part in amateur theatricals, and to teachers who coach plays.

Prerequisite: Consent of instructor.

330 ADVANCED PUBLIC SPEAKING. Class 3 hours. Credit 3.

This course is an extension of 130. It affords the student an opportunity to become an effective speaker through the preparation and delivery of various forms of speeches adapted to definite audiences.

Prerequisite: P. S. 130, and consent of instructor.

331 LITERARY INTERPRETATION. Class 3 hours. Credit 3.

The end and aims of interpretation. Voice, diction, and action are emphasized. Reading of selected prose and poetry.

Prerequisite: Consent of instructor.

332 ORAL ENGLISH. Class 3 hours. Credit 3.

A course designed for teachers of English in secondary schools. Standard literary classics will be interpreted orally. Emphasis will be placed on college entrance requirements in English. Vocal technique. Voice defects, diagnosis and treatment. Criteria for judging contests.

Prerequisite: Consent of instructor.

333 PUBLIC SPEAKING. Class 3 hours. Credit 3.

The course aims to cultivate in the student a fluent, forceful and effective presentation of his own thoughts to others. Daily practice will be given on assigned subjects previously outlined, though the diction of the speech is not memorized. The classes in this course will be organized according to schools, as far as possible, in order to accommodate the training to the needs of the students in their respective schools.

Prerequisite: P. S. 130 or 131, and consent of instructor.

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## THE DEPARTMENT OF MUSIC

BOHUMIL MAKOVSKY, *Director.*

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The Department of Music forms an integral part of the College, and is under the same government and discipline. But its immediate interests and specific work are under the supervision of the Director of the Department of Music. The purpose of the department is to provide opportunities for obtaining a good musical education under the auspices of the Oklahoma A. and M. College. The general plan of work is the same as that of the best American schools of music. These courses of study are thorough and comprehensive,

and the methods of instruction are along modern lines. The aim is to teach music, not only as an accomplishment, but also as an aid in the development of the highest type of manhood and womanhood. The intimate connection of the department with the other departments of the College presents to the students opportunities of pursuing musical and literary studies at the same time. And such a combination is strongly recommended from an educational point of view. The ultimate aim is to train for life, to use the art of music as a means of intellectual, aesthetic and moral culture.

Instruction is offered in piano, voice culture, violin, brass and reed instruments, and public school music; also in theoretical courses, including harmony, appreciation, history and theory of music, instrumentation and transposition, ear-training and conducting.

Public performances being part of the course of study in a practical subject, all students are required to participate in a program when sufficiently prepared. Students, who by reason of deficient musical ability, inattention or other valid reason, fail to make satisfactory progress, may be dropped from the classes.

Practical courses include regular attendance in either Men's Glee Club, Women's Glee Club, Choral Society, Orchestra and Band, unless a student is excused by the Director of Music. The time required for the completion of the regular diploma courses in music will depend upon the student's ability, daily practice and previous work in music. Students not wishing to complete a regular diploma course may select such branches as meet their requirements, provided they are prepared to pursue them profitably.

Most of the regular College courses will allow as much as 8 credits in music to be applied for graduation. Courses in music which may be applied, and the amount of credit to be given for each quarter's work:

1 Piano .....	1	1
2 Voice .....	1	1
3 Violin .....	1	1
4 Wind Instruments .....	1	1
5 Public School Music .....	2	2
6 Music Theory or Harmony .....	2	$\frac{2}{3}$
7 Choral Practice .....	2	$\frac{2}{3}$
8 Band or Orchestra, Junior or Senior .....	3	1

## PIANO DEPARTMENT

DANIEL L. HUFFMAN  
JANE PORTER SLOSS  
THAMAZIN HUTCHINS

## CURRICULUM

## FIRST YEAR

	Hrs.	Cr.
Piano, Music 120-121-122 .....	2	(6) 12
English 130-131-132 .....	3	9
Foreign Language .....	3	9
Solfeggio, Music 130-131-132 .....	2	6
History of Music, Music 140-141-142 .....	2	6
Public School Music, Music 133-134-135 .....	2	6
Physical Education .....		3
Military Science .....		3

## SECOND YEAR

	Hrs.	Cr.
Piano, Music 221-222-223 .....	2	(6) 12
English 224-225-209 .....	3	6
Foreign Language .....	5	10
Harmony, Music 250-251-252 .....	2	6
Psychology 220-221 .....	4	8
Physical Education .....		3
Military Science .....		3½
Elective .....		2

The same Foreign Language must be elected for two consecutive years.

## THIRD YEAR

	Hrs.	Cr.
Piano, Music 320-321-322 .....	2	(2) 12
Harmony, Music 350-351-352 .....	2	6
Theory, Music 353-354-355 .....	2	6
Ensemble, Music 356-357-358 .....	2	6
Instrumentation, Music 337-338-339 .....	1	3
Pedagogy, Music 360-361-362 .....	2	6
Public Speaking 130 .....	3	3
Elective .....		6

## FOURTH YEAR

	Hrs.	Cr.
Piano, Music 420-421-422 .....	2	(6) 12
Harmonic Analysis, Music 460-461-462 .....	2	6
Practice Teaching, Music 470-471-472 .....	2	6
Musical Appreciation, Music 473-474-475 .....	2	6
Counterpoint, Music 476-477-478 .....	2	6
Recitals .....		2
Electives .....		13

## APPLIED MUSIC

## FIRST YEAR

Exercises and studies suited to individual needs.

Bach	Two-Part Inventions
Beethoven	Sonatinas, Op. 49, No. 1
Haydn	One Sonata
Mozart	One Sonata
Mendelssohn	Songs Without Words
Chopin	Easier Preludes
Schumann	Slumber Song
Greig	Watchman's Song
	Butterfly
Merkel	Butterfly
Holzel	Songs Without Words
MacDowell	To A Wild Rose
	Arabesque
Torjussen	To The Rising Sun
	Forest Brook
Manna-Zucca	Frolic

## SECOND YEAR

Exercises and Studies suited to individual needs.

Bach	Three-Part Inventions
Haydn	Sonata in E-Minor
Mozart	One Sonata

Beethoven	Sonata Op. 14, No. 2
Schumann	Scenes From Childhood
Schubert	Impromptu in E Flat
	Impromptu in A Flat
Mendelssohn	Songs Without Words
Chopin	Easier Mazurkas, Preludes, Waltzes
Moszkowski	Serenata
Poldini	Dancing Doll
Huss	Prelude in D Major, Op. 17
MacDowell	Selections from Op. 39
Pieces by other modern composers.	

THIRD YEAR

Exercises and studies suited to individual needs.

Bach	One Prelude and Fugue
Handel	Air and Variations in B Flat
Mozart	Fantasy and Sonata in C Minor
Beethoven	Sonata Op. 13
Schubert-Liszt	"Hark, Hark, the Lark."
Mendelssohn	Scherzo in E Minor
Grieg	Holberg Suite
Chopin	Waltzes, Etudes, Nocturnes
Schumann	Novellette in F Major
Liszt	Consolation No. 6
Moszkowski	Waltz, Op. 39
MacDowell	Hungarian, Op. 39
Debussy	Second Arabesque
Arthur Foote	Caprice in C
Borowski	Mazurka in C Minor
Leschetizky	Second Nocturne Op. 12

FOURTH YEAR

Exercises and studies suited to individual needs.

Bach	One Prelude and Fugue
Haydn	Variations in F
Beethoven	Sonata Op. 27, No. 2, or Op. 31, No. 2
Schumann	Prophet Bird
Chopin	Nocturnes, Polonaises, Ballade in A Flat
Grieg	Sonata in E Minor
Liszt	Liebestraume in A Flat
Karganoff	Second Scherzo
MacDowell	Polonaise in E Minor, Op. 46
Debussy	Reflections in the Water

Concertos by Mendelssohn, Mozart, Beethoven.

Four numbers from each of the above groups must be prepared for public performances.

For any composition in the above four groups, a composition of equal merit may be substituted.

All candidates for graduation may be required to perform in a Pupils' Recital or Advanced Students' Concert at least once in their Junior year and twice in their Senior year.



VOICE DEPARTMENT

JOHN W. BRIGHAM

ELIZABETH KATHERINE MOREHARDT

Students desirous of studying voice as a major subject must have completed at least one year of piano or one year of sight-singing.

The Voice Department aims to give its students a proper ideal of pure and resonant vocal tone, and to develop their capacity for producing such tone, as well as to increase the flexibility and to strengthen and extend the range of the voice.

It aims also to give a comprehensive repertoire of such songs

in English and other languages as have demonstrated their permanent artistic value, together with the most important arias in oratorios and in Italian and French operas. To this end great stress is laid upon diction in English, Italian and French.

Three years of chorus sight singing is required of all voice students who intend to qualify for the diploma.

Students will be required to appear in Student Recitals or advanced Student Concerts during their Junior and Senior years.

Candidates for diploma in voice must perform creditably in public a program which shall contain at least one operatic number and selection from a standard oratorio, as well as representative English, French, and Italian songs.

#### CURRICULUM

##### FIRST YEAR

	Hrs.	Cr.
Voice 123-124-125 .....	2	(6) 12
Piano 120-121-122 .....	2	6
English 130-131-132 .....	3	9
Public School Music 133-134-135 .....	2	6
Solfeggio 130-131-132 .....	2	6
History of Music 140-141-142 .....	2	6
Physical Education 131-132-133 .....		3
Military Science 101-102-103 .....		3

##### SECOND YEAR

Voice 223-224-225 .....	2	(6) 12
Piano 220-221-222 .....	2	6
English 224-225-231 .....	3	9
Solfeggio 230-231-232 .....	2	6
Harmony 250-251-252 .....	2	6
Education 220-221 .....	4	8
Military Science 201-202-203 .....		3½
Public Speaking 130 .....	3	3
Electives .....		4

##### THIRD YEAR

Voice 323-324-325 .....	2	(6) 12
Piano 321-322-323 .....	3	9
Foreign Language .....	3	9
Musical Pedagogy 360-361-362 .....	2	6
Theory 353-354-355 .....	2	6
Electives .....		4

##### FOURTH YEAR

Voice 423-424-425 .....	2	(6) 12
French .....	5	10
Practice Teaching 470-471-472 .....	2	6
Appreciation of Music 473-474-475 .....	2	6
Conducting 480-481-482 .....	1	3
Counterpoint Music 476-477-478 .....	2	6
Electives .....		4

# VIOLIN DEPARTMENT

FRANK HLADKY

## CURRICULUM

### FIRST YEAR

	Hrs.	Cr.
Violin, Music 126, 127, 128 .....	2	(6) 12
English 130, 131, 132 .....	3	9
Foreign Language .....	3	9
Solfeggio, Music 130, 131, 132 .....	2	6
History, Music 140, 141, 142 .....	2	6
Physical Education 131, 132, 133 .....		3
Military Science, 101, 102, 103 .....		3
Electives .....		6

### SECOND YEAR

Violin, Music 226, 227, 228 .....	2	(6) 12
Piano, Music 220, 221, 222 .....	1	3
English 231, 232 .....	5	10
Psychology 203, 204 .....	4	8
Public Speaking 130 .....	3	3
Harmony, Music 250, 251, 252 .....	2	6
Military Science 201, 202, 203 .....		32½
Orchestra .....	2	6
Electives .....		3

### THIRD YEAR

Violin, Music 326, 327, 328 .....	2	(6) 12
Piano, Music 320, 321, 322 .....	1	3
Brass or Reed, Music 317, 318, 319 .....	1	3
Instrumentation, Music 337, 338, 339 .....	1	3
Transposition, Music 373, 374, 375 .....	1	3
Practice of Teaching, Music 370, 371, 372 .....	2	6
Harmony, Music 350, 351, 352 .....	2	6
Theory, Music 353, 354, 355 .....	2	6
Orchestra .....	2	6

### FOURTH YEAR

Violin, Music 426, 427, 428 .....	2	(6) 12
Brass and Reed, Music 417, 418, 419 .....	1	3
Practice of Teaching, Music 470, 471, 472 .....	2	6
Practice of Conducting, Music 480, 481, 482 .....	1	3
Ensemble, Music 356, 357, 358 .....	2	6
Counterpoint, Music 476, 477, 478 .....	2	6
Orchestra .....	2	6
Electives .....		6

## APPLIED MUSIC

Entrance to this course depends on the ability of the student. Since some students are more proficient than others, less work needs be done.

Technical work required for the certificate of music in violin:

### FIRST YEAR

Kelley, First Studies.	Sevcik, Op. 2, Book II.
Sevcik, Op. 6, Books I, V.	Mittel, Popular Graded Course.
Sevcik, Op. 2, Book I.	Lehmann, 25 pieces in first position.
Sevcik, Op. 7, Book I.	Most Popular Violin Solos.
Kayser, Book I.	Dancla, Op. 68, Studies.
Sevcik, Op. 1, Book I.	

### SECOND YEAR

Sevcik, Op. 7, Book II.	Mazas, Books I, II.
Sevcik, Op. 1, Book II.	Dancla Air Varies.
Sevcik, Op. 6, Books VI, VII.	Schubert Sonatas.
Kayser, Books II, III.	Sitt, Album of Solos.
Sevcik, Op. 2, Book III.	Pleyel, six Duos Op. 23.
Sevcik, Op. 8, shifting position.	Meerts 12 Studies.
Sevcik, Op. 9, studies.	Accolay, Concert A Minor.

### THIRD YEAR

Sevcik, Op. 2, Book IV.	Viotti, Concerto No. 23.
Sevcik, Op. 1, Book III.	Mozart Sonatas.
Kreutzer Etudes.	De Beriot Concerto IX, VII.
Fiorillo, 36 Etudes.	Sarasate Dances.
Sevcik, Op. 2, Book V.	Spohr Concerto No. 2, etc.
Rode Caprices.	

## FOURTH YEAR

Sevcik, Op. 2, Book V.  
 Sevcik, Op. 1, Book IV.  
 Bach, 6 Sonatas.  
 Sevcik, Op. 2, Book VI.  
 Gavinies, 24 Studies.  
 Paganini, 24 Caprices.

Viotti Concerto No. 22.  
 Sarasate Zigennerweisen.  
 Bruch Concerto.  
 Mendelssohn Concerto.  
 Paganini Concerto.

Technical work required for the diploma of music in violin: Out of the above named list of compositions a program lasting at least one hour must be prepared, committed to memory and performed in public.

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## DEPARTMENT OF BRASS AND REED INSTRUMENTS

## BOHUMIL MAKOVSKY

## FIRST YEAR

	Hra.	Cr.
Brass or Reed Instruments, Music 117-118-119 .....	2	(6) 12
English 130-131-132 .....	3	9
Foreign Language .....	3	9
Solfeggio, Music 130-131-132 .....	2	6
History, Music 140-141-142 .....	2	6
Physical Education 131-132-133 .....		3
Military Science 101-102-103 .....		3
Electives .....		5

## SECOND YEAR

Brass and Reed Instruments, Music 217-218-219 .....	2	(6) 12
Piano, Music 220-221-222 .....	1	3
English 231-232 .....	5	10
Education 220-221 .....	4	8
Public Speaking 130 .....	3	3
Harmony, Music 250-251-252 .....	2	6
Military Science .....		3 $\frac{2}{3}$
Electives .....		7

## THIRD YEAR

Brass and Reed Instruments, Music 317-318-319 .....	2	(6) 12
Piano, Music 320-321-322 .....	1	3
Violin, Music 326-327-328 .....	1	3
Instrumentation, Music 337-338-339 .....	1	3
Practice of Teaching, Music 370-371-372 .....	2	6
Transposition, Music 373-374-375 .....	1	3
Harmony, Music 350-351-352 .....	2	6
Theory, Music 353-354-355 .....	2	6
Band, Music .....	3	9

## FOURTH YEAR

Brass and Reed Instruments, Music 417-418-419 .....	2	(6) 12
Violin, Music 426-427-428 .....	1	3
Practice of Teaching, Music 470-471-472 .....	2	6
Practice of Conducting, Music 480-481-482 .....	1	3
Ensemble, Music 356-357-358 .....	2	6
Counterpoint, Music 476-477-478 .....	2	6
Band, Music .....	3	9
Electives .....	1	3

All candidates for graduation may be required to perform by appointment in a Pupil's Recital or Advanced Students' Concert at least once in their Junior year and twice in their Senior year, unless excused by the Director.

## BRASS INSTRUMENTS

The course in brass instruments develops a correct breath control, as used by all best artists; a scientifically formed embouchure, good attack and round, full tone. At first the pupil is asked to pay considerable attention to tone studies, lip drills and articulation exercises, from authors selected to best fit the pupil's need. Easy solo and duet pieces are introduced from time to time. A study of scales, awkward skips and slurrings is next begun, lead-

ing toward velocity studies, examples in phrasing, single and double-tonguing, studies in transposition, pieces of the various type, etc.

#### REED INSTRUMENTS

This department also offers artistic work in clarinet and saxophone. In general the outlines for brass instruments equally applies, excepting that the nature of the instruments causes some points of variance.

#### COLLEGE BAND

The College Band is directed by the instructors in this department, and is governed by the rules of the Military Department. It gives one concert a year at the College Auditorium, which is followed with about a ten-day concert tour over the State. The band holds an important relation to College life by arousing school spirit playing at the football and baseball games, track meets, and at other events. In addition, students have many opportunities for solo work in the various literary societies.

#### PUBLIC SCHOOL MUSIC

In public schools, music has taken a very important place, and there is a growing demand for teachers who are equipped and capable of directing community music, as well as the work in the grades or high school.

Credit for work in this subject done at some other college or normal school should be given, but such credit should be claimed before entering the Senior year.

This course is carefully classified for each of the grades in the public schools, the work being outlined to develop the vocal ability and musical education of the pupils to suit the particular condition of the mind and the voice of the child at the average age in each grade. Advanced work is given for those desiring special preparation. This outline is somewhat as follows:

Rote songs for little folks. Study of the "staff," "notes," "scale." Location of "do", or the keynote, in nine different keys. Sight-reading and singing, by syllable and by letter. Much attention given to tone quality and rhythm. Complete analysis of songs—as to key signature, meter signature, tempo signs, marks of expression, the different values of notes used, etc. Written work from oral dictation of tones, syllables or letters. Written work from dictation of rhythm. Transposition of songs into different keys. Special practice in music-class conducting. Singing at sight, rounds, and two, three and four-part songs. Thorough practice writing and singing major, minor and chromatic scales. "Spelling" and "pronouncing" different triads or chords. A little study of the elements of harmony.

## DEPARTMENT OF PHYSICAL EDUCATION

E. C. GALLAGHER, *Professor.*  
RUTH DuBOIS, *Professor.*  
J. F. MAULBETSCH, *Head Coach.*  
R. W. KENNY, *Assistant Coach.*  
T. M. AYCOCK, *Assistant Professor.*  
EMELIA M. SKARRA, *Assistant Professor.*

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The work in Physical Education for men is given in the new gymnasium, one of the best in the Southwest. The gymnasium floor is large enough to get a maximum basketball court, and the court is of hard wood. A running track nineteen laps to the mile surrounds the balcony. The seating capacity of the bleachers in the gymnasium is 2,500. A large locker room, excellent swimming pool, special varsity and visiting team rooms, with six offices make up the gymnasium proper. Adjacent to the gymnasium the baseball, football and ten acres of practice fields are located. The new grandstand seats more than 3,000 spectators on one side while the movable bleachers on the other side seat 2,000.

The athletic fields will easily care for 1,000 athletes, and many days during this past year more than 800 students took systematic exercises.

*EQUIPMENT FOR WOMEN*

The two gymnasium floors for women, located in the Woman's Building, are unobstructed rooms, each 35x65 feet, and are well lighted. There are rooms adjoining, well equipped with steel lockers. The main gymnasium is equipped with hand apparatus. At the rear of the building are the women's tennis courts and a large field used for athletics and for out-of-doors class-work. The women have the use of the large floor and heavy apparatus in the men's new gymnasium at regular periods and also the new swimming pool connected with the men's gymnasium. This pool, 20x60 feet, has in addition good shower baths, dressing rooms and electrical hair-driers.

*COMPULSORY TRAINING FOR MEN*

When a man enters College he is required to take three quarters of work in Physical Education. He is first given an examination and a complete chart of his measurements is taken. The Director makes out a chart of exercises needed to develop his body. He is required to know all his principal measurements and his deformities and the exercises to correct them.

The training given men students consists of body building drills, with and without apparatus, work on the principal pieces of heavy apparatus and in the Spring quarter work in track and field athletics. The department tries to build up all weak parts of the student's body and develop the best possible coordination.

#### *PHYSICAL EDUCATION FOR WOMEN*

For all women other than secondary students physical education is required during the first two years of residence throughout the College year. Six quarter credits are required for graduation. For a student entering as a Senior without credits in Physical Education, the requirement is one year. All women students are expected to be able to swim forty yards before final credit will be given or transferred credit accepted.

Two years of Physical Education also is required of all secondary students. Credits for courses of equal rank from other secondary schools may apply. All secondary students are expected to be able to swim twenty-five yards before final credit will be given or transferred credit accepted.

#### *EXAMINATIONS FOR WOMEN*

Medical and physical examinations given by the Department are required of all women before admission to any practice course in this Department.

No woman student may participate in athletic events or contests who has not passed her medical and physical examination or is not doing passing work in all courses carried.

#### *EQUIPMENT FOR WOMEN*

White middies or white with blue collars, high white tennis shoes, and regulation bloomers are required for women. All or any part may be purchased here. The bloomers can be purchased only through the College. They are sold at cost; in 1921 this was \$4.10.

Uniform suits only are allowed on the field or floor. Only regulation swimming suits may be used. These are supplied. Each one comes fresh from the laundry. The regulation caps are bought; in 1922 the cost was 55 cents each.

#### *EXEMPTIONS AND DEFERMENTS*

All requests for exemption, postponement, or "drop" from Physical Education for women must be made at the office of the

Director of Physical Education for women, be approved by her, and recommended by her to the respective Deans for approval.

Students declared physically unfit by the College Physician or Women's Physical Director are exempt from requirements in Physical Education.

Individual and prescriptive work is given to students unable to participate in the more vigorous regular class work. Substitute work in clinic classes is provided in many cases rather than exemption.

Adult regular students more than 25 years old not intending to graduate are exempt from Physical Education. Exemptions are allowed in such other cases as the Physical Director deems advisable.

Deferment is allowed a student declared by the College Physician or Women's Physical Director temporarily physically unfit. Deferment also is allowed a self-supporting student where the hours of labor actually conflict with the hours of required work.

#### *REQUIRED COURSES*

The first year of required work, Physical Education 131, 132, 133, comprises regular progressive work in gymnastics and swimming designed to improve posture, general health and physical conditions, and hygiene lectures.

The second year of required work, for women only, Physical Education 231, 232, 233, is comprised of more advanced Swedish and German Gymnastics, swimming, marching tactics, games, and folk dances.

Gymnasium classes are held out-of-doors as much as practicable, and the swimming pool is open as much as possible for practice periods.

#### *LETTER WORK FOR MEN*

In order to get a letter in football a man must take part in at least one-half of the games of the schedule and at least half of the games in November. For a letter in basketball a player must take part in one-half of the contests. For a letter in wrestling a member of a team must defeat a man from a school of equal standing or win a point in a conference meet. The requirements for tennis are the same as for wrestling. A letter is given in track when a man wins a first in a dual meet with a school of equal standing, or

a point in a Conference Meet, or wins eleven points during the season.

Before being allowed to participate on a team a student must meet the requirements of the conference as to scholastic standing. For the Southwest Conference he must have passed two-thirds of the two preceeding quarters work. For participation in the Missouri Valley Conference he must pass in twenty-eight hours during the preceeding year. Before being allowed to participate on an intercollegiate team a student must have been in attendance at the College for three quarters. No special or preparatory students are allowed to participate.

### *ATHLETICS FOR WOMEN*

The College Women's Athletic Association which is affiliated with The National Association is two years old and is growing rapidly and steadily. Its purpose is to encourage all women students to take part in athletics. The association working in close cooperation with the Department of Physical Education is doing a great deal to direct and encourage the physical activities of the College women. The first "O" sweater ever awarded a girl in A. and M. in athletics was won in the Spring of 1922 after two years of faithful and successful efforts. The athletics for women are intramural only. The activities for 1921-1922 were soccer, hiking, basketball, baseball, swimming, tennis, and gymnastics.

### *ELECTIVE WORK OFFERED*

Advanced work is offered in swimming. If examinations are successfully passed, the American Red Cross Life Saver's Certificate and Emblem are granted.

A Physical Education Certificate is given those students who successfully complete courses listed below in the outline:

#### **FRESHMAN**

Phy. Edu. 131-132-133. Credit 1-1-1  
Mil. Sci. (Men). Credit 1-1-1

#### **JUNIOR**

Phy. Edu. 341-342-343. Credit 2-2-2  
Phy. Edu. 351-352-353. Credit 1-1-1

#### **SOPHOMORE**

Mil. Sci. (Men and Women). Credit 1-1-1  
Phy. Edu. 241-242-243. Credit 1-1-1  
Phy. Edu. 263. Credit 2

#### **SENIOR**

Phy. Edu. 471-472-473. Credit 3-3-3

All students must be able to pass swimming examinations.

A physical Education Diploma, B. S. Degree, and State Life Teacher's Certificate are granted those who satisfactorily meet the requirements of the four-year course.

### *SUBJECTS*

#### **REQUIRED COURSES**

131-132-133 FIRST YEAR GYMNASTICS. Three hours per week.

Required of all students during first year residence.

**231-232-233 SECOND YEAR GYMNASTICS.** Three hours per week.

Required of all women students during their second year of residence.

Prerequisite: Phys. Edu. 131, 132, 133.

**FRESHMAN YEAR****141-142-143 PERSONAL AND PUBLIC HYGIENE.** Class 2 hours. Credit 2-2-2.

Foods and chemistry of their digestion, clothing; bathing, respiration, circulation, sleep, recreation; communicable diseases; care of the eyes, ears, nose, and throat, use of charts and tests for eyes and ears.

Hygiene of school room, lighting; ventilation, heating, sewage systems; water supply; plumbing; sanitation measures and laws; disease; vaccination and inoculation.

Lecture two hours, outside readings and reports.

**151-152-153 PLAY AND RECREATION.** Class 2 hours. Credit 2-2-2.

Theories and philosophy of play. Discussion of the development of playgrounds, recreation centers, boy scout movement and the girls campfire; the organization, construction and equipment of each of these. Plays and games suitable for all occasions and their teaching.

Lecture two hours. Outside readings, reports and sketchings.

**161-162-163 ELEMENTARY FOLK DANCING AND ATHLETICS.** (Women). Three hours per week. Credit 1-1-1.

National dances and their teaching. Special instruction in fundamentals of each sport in its season, tennis, soccer, hockey, basketball, baseball and swimming.

**SOPHOMORE YEAR****241-242-243 NORMAL PHYSICAL EDUCATION.** Three hours per week. Credit 1.

Prerequisite: Phys. Edu. 131, 132, 133.

Gymnastics for elementary grades with and without apparatus. Gymnastic lessons for high school girls. Gymnastic lessons for high school boys. Gymnastics for special classes.

**271-272-273 DRILL AND MARKSMANSHIP (Women).** Three hours per week. Credit 1.

Prerequisite: Phys. Edu. 131, 132, 133.

Military tactics, drill and practice in giving commands in drill, rifle and pistol shooting.

This course is conducted by the Military Department with regular army officer as instructor.

**251 EMERGENCIES AND FIRST AID.** Lecture 1 hour, laboratory 3 hours. Credit 2.

Discussion and practice of the treatment for emergencies and injuries from accident on the gymnasium floor, athletic field, or in the class room or home. First aid, bandaging, care of fractures, dislocations, sprains, and wounds. Methods of resuscitation in case of drowning.

For those who successfully pass the examination, a Red Cross Diploma in First Aid may be had.

**263 TRACK AND FIELD ATHLETICS.** Lecture 2 hours, laboratory 3 hours. Credit 3.

Discussion of different methods of athletic training, complete system of training for each event on track and field, massage and care of injuries, diet for athletes, formulae for linaments and rub-down lotions. A complete study of track and field athletics in all its phases.

JUNIOR YEAR

- 371-372-373 HUMAN ANATOMY. Lecture 4 hours. Credit 4-4-4.  
Not offered in 1922-23.  
Prerequisite: Beginning Zoology.  
Lectures on osteology, neurology, myology; the digestive, respiratory, circulatory and reproductive organs. Gives the student a detailed knowledge of the bones, muscles, blood-vessels, nerves and their relationships. Notebooks and drawing are especially emphasized.  
Text: "Gray's Human Anatomy."
- 331 PHYSIOLOGY OF BODILY EXERCISE. Lecture 2 hours. Credit 2-2-2.  
Prerequisite: Phys. Edu. 131, 132, 133.  
Study of physiological reasons for bodily activities for muscular training, and for fatigue, stiffness, breathlessness, and other sub or abnormal body conditions.
- 341-342-343 HISTORY, PRINCIPLES AND METHODS. Class 2 hours.  
Credit 2-2-2.  
Prerequisite: Phys. Edu. 131, 132, 133, 241, 242, 243.  
History of gymnastic systems. Reading and reports on certain systems and present day movements in various countries. Methods of teaching Swedish, German and General Gymnastics.. Practice in arranging varying. Numbers of lessons in each of these for different ages and classes.
- 351-352-353 OBSERVATION AND PRACTICE TEACHING. Laboratory 3 hours. Credit 1-1-1.  
Observation of methods used in city public schools and in the College gymnasium classes. Supervised practice teaching. Hours to be arranged.
- 361-362 ADVANCED GYMNASTICS AND DANCING. (Men and Women).  
Class 5 hours. Credit 1½-1½.  
Prerequisite: Phys. Edu. 131, 132, 133, 241, 242, 243.  
Advanced Swedish gymnastics. Advanced German gymnastics. Rhythmic work. Classic, oriental and character dancing.
- 333 PHYSICAL DIAGNOSIS.  
Prerequisite: Phys. Edu. 141, 142, 143, and Physiology.  
Discussion of thoracic and abdominal organs. Practice in determining normal and abnormal conditions.
- 431 KINESIOLOGY AND APPLIED ANATOMY. Lecture and discussions 3 hours. Credit 3.  
Prerequisite: Human Anatomy. Phys. Edu. 371, 372, 373.  
Muscles, theories of their exercises and their relation to common gymnastic movements, their Gymnastic movements, arms, varieties, and effect on bodily development and efficiency.
- 443 ADMINISTRATION AND EQUIPMENT. Class 3 hours. Credit 3.  
Lectures on organization, management, and equipment of a department. Assigned problems.
- 451-452-453 OBSERVATION AND PRACTICE TEACHING. Continued from Junior year.
- 461-462 ADVANCED GYMNASTICS. Class 5 hours. Credit 1½-1½.  
Prerequisite: Phys. Edu. 361, 362.  
(a) Men: Advanced gymnastics, boxing, wrestling, etc.  
(b) Women: Advanced Swedish and German gymnastics. Advanced interpretative dancing and original work.

471-472-473 COACHING. Lecture 2 hours, laboratory 3 hours. Credit 3-3-3.

(a) Men: This course is designed to prepare men to coach the major sports in colleges or high schools. The first quarter is devoted to football, the second to basketball and the third to baseball. The work in track is found in another course. Everything that has to do with the theory of the sports, coaching of a team, managing a team and the care of injuries is discussed. These courses are as complete as is possible to make them.

(b) Women: Similar work in soccer, hockey, basketball, baseball and tennis.

483 ANTHROPOMETRY AND MEDICAL GYMNASTICS. Credit 3.

Prerequisite: Human Anatomy.

Lecture and practice in taking measurements. Use of charts. Study of human proportions.

Lecture and practice in corrective gymnastics. Study of symptoms of common troubles and their gymnastic treatment.

Massage, theory and practice.

THE SCHOOL OF EDUCATION



# FACULTY

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- JAMES BURNETTE ESKRIDGE, A. M., Ph. D.; *President of the College.*  
 HERBERT PATTERSON, A. B., A. M., Ph. D.; *Dean of the School of Education, Professor of Education.*  
 SOLOMON LUTHER REED, A. B., A. M., Ph. D.; *Professor of Education.*  
 FRED McCARREL, B. S., M. S.; *Associate Professor of Education.*  
 CHARLES LEONARD KEZER, B. S., A. B.; *Supervisor of Practice Teaching.*  
 JAMES HENRY CALDWELL; *Assistant Professor of History and Instructor in Education.*
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- HENRY FULLER HOLTZCLAW, A. B., Ph. D.; *Dean of the School of Commerce and Marketing, Professor of Economics.*  
 ELLA NORA MILLER, B. S., M. S.; *Dean of the School of Home Economics, Professor of Domestic Science.*  
 JAMES ROBERT CAMPBELL, B. A., M. A.; *Dean of the School of Correspondence-Study, Professor of Education.*  
 FRED MAAS ROLFS, B. S., M. S., Ph. D.; *Professor of Horticulture.*  
 EDWARD CLARK GALLAGHER, B. S.; *Director of Athletics, Professor of Physical Education.*  
 DeWITT TALMADGE HUNT, B. S.; *Superintendent of Shops.*  
 \*HILTON IRA JONES, A. B., A. M., Ph. D.; *Professor of Chemistry.*  
 OLIN MITCHELL CLARK, B. S.; *Professor of Agricultural Education.*  
 ALBERT SAMUEL HIATT, A. B.; *Professor of History.*  
 ALMON AI ARNOLD, A. B., A. M.; *Professor of Modern Languages.*  
 DAVID TERRY MARTIN, A. B.; *Professor of Public Speaking.*  
 WILLIAM BENJAMIN PARKS, A. M., S. M., Ph. D.; *Professor of Chemistry.*  
 WILLIAM PTOLEMY POWELL, B. A., M. A.; *Professor of English.*  
 RUTH DuBOIS, Diploma, A. B.; *Professor of Physical Education for Women.*  
 JOSEPH BENJAMIN PATE, A. B., Maj., Inf., U. S. Army; *Commandant, Professor of Military Science and Tactics.*  
 JUDSON ALLEN TOLMAN, A. B., A. M., Ph. D.; *Professor of Ancient Languages.*  
 ROBERT OSCAR WHITENTON, A. B., M. S.; *Associate Professor of Zoology.*  
 GRACE ALICE MOUNTCASTLE, Ph. B.; *Associate Professor of English.*  
 AGNES BERRIGAN, B. A., M. A.; *Associate Professor of English.*  
 EWALD W. SCHUHMAN, A. B., A. M.; *Assistant Professor of Physics.*  
 LLOYD KEITH COVELLE, Certificate; *Assistant Professor in Shops.*  
 EDWIN DORENCE SODERSTROM, Diploma; *Assistant Professor in Shop Practice.*  
 EMELIA MARIE SKARRA, Diploma; *Assistant Professor of Physical Education for Women.*  
 CHARLES LESLIE NICKOLLS, B. S., M. S.; *Assistant Professor of Chemistry.*  
 THOMAS MALCOLM AYCOCK, B. S.; *Assistant Professor of Physical Education.*  
 FRANK RUSSELL BRADLEY, *Instructor in Shops.*  
 DAISY DELL MCCOOL, Diploma; *Instructor in Drawing and Art.*  
 ELIZABETH KATHERINE MOREHARDT, Diploma; *Instructor in Voice.*  
 \*CHARLES MEEKS ANDERSON, B. A., M. A.; *Instructor in Economics.*  
 ISABELLE MILLIGAN STORY, B. S.; *Instructor in Domestic Art.*

\*On leave of absence.

# THE SCHOOL OF EDUCATION

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The purpose of the School of Education is two-fold: First, to prepare superintendents, principals, supervisors and teachers for the public schools of Oklahoma; second, to enlarge the appreciation of the importance of the American public school system in the advancement of civilization. In furtherance of the first of these purposes, prescribed courses are offered leading to the attainment of the several kinds of teachers' certificates given in the State of Oklahoma; while in harmony with the second purpose, students enrolled in other schools of the College are allowed to elect courses in the School of Education.

## *HISTORY*

Courses in Education were first given in 1909. The importance of teacher-training courses steadily gained emphasis, and in 1913 the School of Education was organized as a distinct school, coordinate in rank with other schools of the College.

## *COURSES*

Numerous courses are given leading to the degrees of Master of Science and Bachelor of Science, and to the Life High School State Certificate, Five Year High School State Certificate, Two-Year High School State Certificate, Life Manual Training State Certificate, and Two-Year Elementary State Certificate.

## *THE EDUCATION SOCIETY*

The Education Society of Oklahoma Agricultural and Mechanical College is an organization composed of students in the School of Education. Frequent meetings are held, and practical problems relating to teaching as a vocation are discussed. The society has been instrumental in developing friendship among its members, and in emphasizing the importance of technical teacher-training.

## *EMPLOYMENT*

Graduates of the School of Education experience no difficulty

in securing employment at good salaries as teachers in some of the best schools of Oklahoma. For several years the demand has been far in excess of the supply. The School of Education helps its graduates in locating work as teachers.

#### *M. S. DEGREE IN EDUCATION*

The degree of Master of Science in Education is granted to graduates whose major work is in the School of Education. The general requirements for this degree are stated in the section of this catalog under the heading "Requirements for the Master's Degree."

In addition to fulfilling these general requirements, candidates for the degree of Master of Science in Education must present evidence of at least nine months' successful teaching.

#### *B. S. DEGREE AND LIFE HIGH SCHOOL CERTIFICATE*

Students who complete the four-year course in the School of Education receive a Bachelor of Science degree and a Life High School State Certificate in Oklahoma.

Graduates from this College who are not in the School of Education in order to secure this certificate must complete twenty-four semester hours (thirty-six quarter hours) of work in Education.

"The Life High School State Certificate is issued to graduates of the arts and science course of any accredited college or university of Oklahoma who have completed twenty-four semester hours of work in psychology and education (provided that in the case of graduates of the Oklahoma A. and M. College nine hours of work in vocational subjects may be substituted for the same number of hours in psychology and education) and to such graduates who have completed sixteen semester hours of work in psychology and education after five years of successful teaching in Oklahoma."—Rules and Regulations of the State Board of Education, August 1, 1921; section 10.

#### *FIVE-YEAR HIGH SCHOOL STATE CERTIFICATE*

A High School State Certificate valid for five years is granted to regular College graduates who complete sixteen semester hours (twenty-four quarter hours) of work in psychology and education.

"A five-year high school state certificate is issued to graduates of the arts and science course of any accredited college or university in Oklahoma who have completed sixteen semester hours of work in psychology and education. This certificate shall be made permanent when the holder has taught successfully in Oklahoma five years."—Rules and Regulations of the State Board of Education, August 1, 1921; section 12.

#### *TWO-YEAR HIGH SCHOOL STATE CERTIFICATE*

A High School State Certificate valid for two years is granted to students who have completed two years of regular college work, including eight hours (twelve quarter hours) of work in psychology and education. Students completing the Sophomore year in the School of Education are qualified for this certificate.

Students in other schools of the College, desiring this certificate, must elect the required education courses. They should take Edu. 120, Edu. 122, and Edu. 121 or 220.

"A two-year high school state certificate is issued to students who have completed not less than sixty (60) semester hours of work, including eight hours in psychology and education, in the School of Arts and Sciences in one of the accredited four-year colleges or universities of Oklahoma. This certificate may be renewed at the expiration of two years, provided the holder has taught successfully in Oklahoma and has completed two terms or one semester of work toward graduation in the institution through which the license was issued; and renewed for one year thereafter as long as the holder completes a term of work toward graduation each year."—Rules and Regulations of the State Board of Education, August 1, 1921; section 15.

#### *LIFE MANUAL TRAINING STATE CERTIFICATE*

Two years of regular college work including fifteen semester credits (twenty-three quarter credits) of shop work, nine semester credits (fourteen quarter credits) of drawing, and eight semester credits (twelve quarter credits) of education are required for this certificate.

This regulation was adopted by the State Board of Education March 8, 1922.

#### *TWO-YEAR ELEMENTARY STATE CERTIFICATE*

(Grammar Grade or Common School Certificate.)

One year of regular college work, including eight semester credits (twelve quarter credits) in psychology and education are required for this certificate. Students completing the Freshman year in the School of Education are qualified for this certificate.

Students in other schools of the College desiring this certificate must elect a year's work in agriculture and the required education courses. They should take Education 120, Education 121, and Education 122.

"This certificate is issued to graduates of the regular course of fully accredited four-year high schools who have completed thirty semester hours of work, including eight hours in psychology and education, and one semester's work in agriculture in one of the accredited colleges or universities of Oklahoma. Such a certificate may be renewed for two years at expiration provided the holder has completed not less than twenty-four semester hours of work in the institution through which the certificate was issued through the life of the certificate, and renewable each year thereafter as long as the holder completes a term of work toward graduation in the same institution each year."—Rules and Regulations of the State Board of Education, August 1, 1921; section 39.

#### *CREDITS TOWARD TEACHER'S CERTIFICATE*

When a subject is completed at the College, the credit-granting authorities of the State accept that credit instead of an examination.

"Any credit made in such college, which would entitle the holder thereof to graduation in that subject, may be substituted within three years from the time the credit is granted, in lieu of an examination in that subject on any teachers' certificate."—School Laws of Oklahoma, 1919; Article I, Section 11.

All subjects required for teachers' certificates are offered some time during the College year.

### *SUMMER SCHOOL COURES*

Courses in Education which will apply toward all grades of teachers' certificates are offered during the Summer School. Special attention is given to meeting the needs of rural teachers. An annual Summer School bulletin contains full announcement of the courses offered.

### *COURSE FOR NORMAL SCHOOL GRADUATES*

Graduates from the State Normal Schools of Oklahoma and other normal schools of equal standing are admitted to junior standing in the School of Education and may complete the requirements for the B. S. degree and the State Life High School Certificate in two years.

### *COURSES IN VOCATIONAL EDUCATION*

In accordance with the provisions of the Smith-Hughes Act, courses are offered for the preparation of high school teachers of agriculture, of trades and industries, and of home economics. These courses are under the general supervision of the Oklahoma State Board of Vocational Education, whose executive staff has offices in the State capitol, Oklahoma City.

For teachers of agriculture in schools participating in the Smith-Hughes fund, the course must contain at least 40 semester hours of credit in agriculture and 15 semester hours of credit in education.

"Teachers of agriculture in schools participating in the Smith-Hughes fund shall, before employment, be approved by the State Board of Vocational Education, and shall be qualified as follows:

"a. Age. not less than 21 years.

"b. Education. The completion of a four-year course, given in or by an accredited agricultural college, or other accredited institution of college rank, requiring 15 high school units for admission and 120 semester-hours for graduation. The college course shall be such as to give at least 40 semester hours credit in strictly technical or practical work in agriculture; not less than 12 hours of credit shall be in subjects allied to agriculture, and 15 hours in professional work in education, which shall be prescribed by the State Board of Vocational Education, and shall include 3 semester-hours in general psychology and 75 hours in supervised practice-teaching.

"c. Experience. Not less than two full years of actual farm experience in labor or management, at least one of which shall have been continuous so as to give contact with farm conditions during all seasons.

"d. Personality. In order to be approved, the applicant must have such personal qualifications as would fit him for leadership in the community, and for directing students in their school work and home projects.

"e. Certification. No person shall be employed as a teacher of Vocational Agriculture in a school receiving State and Federal reimbursement until he shall have a teacher's certificate or diploma entitling him to teach in the State of Oklahoma, and shall have been approved by the State Board of Vocational Education for the teaching of Vocational Agriculture; and no Federal or State funds shall be used to pay portion of the salary of any teacher of agriculture

unless such teacher has been approved by the State Board of Vocational Education for the teaching of Vocational Agriculture."—Plans of the Oklahoma State Board of Vocational Education.

For a detailed statement of this course, see the School of Agriculture.

For teachers in home economics in schools participating in the Smith-Hughes fund, the course must contain at least 40 semester hours of credit in home economics and 13 semester hours of credit in education.

"Qualifications of Teachers of Home Economics"

"(1) Practical Experience. —The teacher must have had at least two years' actual experience with the practical problems of home economics, or her college course must have included a course in supervised home management under home conditions.

"(2) Training in Home Economics.

"The teacher of Vocational Home Economics must have graduated from a four-year home economics course in an approved college, or possess the qualifications equivalent to graduation.

"(3) Professional Training.

"The teacher of an all-day school must have spent, during her college course, at least 10 percent of her college hours in professional training, which should include special methods in home economics and practical teaching.—Plans of the Oklahoma State Board of Vocational Education, Bulletin No. 3. 1919-20, pages 22-23.

### COURSES IN THE SCHOOL OF EDUCATION

The following outline of study represents the required and elective work in the School of Education. The courses are numbered, beginning with 100 in the Freshman year. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, 200 for Sophomore, 300 for Junior, and 400 for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

The total requirements for graduation are 204 quarter credits.

Sophomore electives are open to Juniors and Seniors where the necessary prerequisite work is taken. Both Junior and Senior electives are open to either Juniors or Seniors.

In the outline below, figures without parenthesis indicate hours of class-work, in parenthesis hours of laboratory work.

Any student may elect the work of the Reserve Officers' Training Corps, which counts 3 hours credit in each quarter for the junior and senior years. This credit will be accepted as a substitute for elective work, or for required work by special arrangement.

### LEADING TO B. S. DEGREE AND LIFE HIGH SCHOOL STATE CERTIFICATE

#### FRESHMAN YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Edu. 120, School Hygiene and Management .....	4	4	Edu. 121, Ele. Psychology .....	4	4
Eng. 130, College .....	3	3	Eng. 131, College .....	3	3
Chem. 106, Inorganic .....	3	(3) 4	Chem. 107, Inorganic .....	3	(3) 4
Agr. Edu. 106, Gen. Agri. ....	3	(6) 5	Agr. Edu. 107, Gen. Agri. ....	3	(6) 5
Phy. Edu. 131 .....	(3)	1	Phy. Edu. 132 .....	(3)	1
Mil. Sci. 101 .....	(3)	1	Mil. Sci. 102 .....	(3)	1

#### SPRING QUARTER

	Hrs.	Cr.
Edu. 122, Methods of Teaching Common Branches .....	4	4
Eng. 132, College .....	3	3
Chem. 108, Inorganic .....	3	(3) 4
Art 119, Pub. School Drawing .....	(6)	2
Edu. 123, Pub. School Music .....	3	3
Phy. Edu. 133 .....	(3)	1
Mil. Sci. 103 .....	(3)	1

SOPHOMORE YEAR

FALL QUARTER

	Hrs.	Cr.
Edu. 220, Gen. Psychology .....	4	4
Eng. 231, Eng. Lit. ....	5	5
Econ. 218, Principles .....	3	3
Phy. Edu. 231, (Women) .....	(3) 1	
Mil. Sci. 201 .....	(3) 1	
Electives (major subjects) .....	4	

WINTER QUARTER

	Hrs.	Cr.
Edu. 221, Educational Psychology .....	4	4
Eng. 232, English Literature ....	4	4
Hist. 311, United States .....	5	5
Phy. Edu. 232, (women) .....	(3) 1	
Mil. Sci. 202 .....	(3) 1	
Electives (major subjects) .....		3

SPRING QUARTER

	Hrs.	Cr.
Pub. Spk. 130, Essentials .....	3	3
Zool. 213, General .....	3 (6)	5
Hist. 312, United States .....	4	4
Phy. Edu. 233, (women) .....	(3) 1	
Mil. Sci. 203 .....	1 (2)	1½
Electives (major subjects) .....		4

JUNIOR YEAR

FALL QUARTER

	Hrs.	Cr.
Edu. 320, History of Education ....	4	4
Eng. 224, Composition .....	3	3
Physics 112, Mechanics (men) .....	3 (3) 4	
H. E. 110, Sewing (women) .....	(3) 1	

WINTER QUARTER

	Hrs.	Cr.
Edu. 321, Psychology of Adol. ....	3	3
Eng. 225, Composition .....	3	3
Physics 113, Heat and Elec., (men) .....	3 (3) 4	
H. E. 111, Sewing (women) ....	(3) 1	

SPRING QUARTER

	Hrs.	Cr.
Edu. 322, Methods of Teaching in High School .....	4	4
Pub. Spk. 230, Arg. and Debate ....	3	3
or		
Pub. Spk. 232, Dramatics .....	3	3
H. E. 112, Sewing, (women) .....	(3) 1	

SENIOR YEAR

FALL QUARTER

	Hrs.	Cr.
Edu. 440, Observation and Practice Teaching .....	1 (6) 3	
Edu. 443, Edu. Measurements .....	2 (3) 3	
Hist. 419, Modern Europe .....	5	5
Electives (major subjects) .....	3	
Electives .....	3	

WINTER QUARTER

	Hrs.	Cr.
Edu. 441, Observation and Practice Teaching .....	1 (6) 3	
Hist. 411, Modern Europe .....	5	5
Electives (major subjects) .....		5
Electives .....		4

SPRING QUARTER

	Hrs.	Cr.
Edu. 442, School Administration ....	3	3
Edu. 444, General Sociology .....	3	3
Electives (major subjects) .....		5
Electives .....		6

*Two Major Subjects Required.*—In addition to the prescribed courses, students are required to elect at least 22 quarter hours in each of two of the following departments: Agriculture; Botany and Zoology; Chemistry; Commerce and Marketing; Drawing and Art; English and Speech; French; History and Economics; Home Economics; Latin; Manual Training; Mathematics; Music; Physical Education; Physics; and Spanish. These two major subjects should be selected with a view to preparing to teach them in high school. Courses in major subjects must be approved by the heads of the departments involved and by the Dean of the School of Education.

A total of 204 quarter hours is required for graduation from the School of Education.

COURSE FOR GRADUATES OF NORMAL SCHOOLS LEADING TO B. S.  
DEGREE AND LIFE HIGH SCHOOL STATE CERTIFICATE

JUNIOR YEAR

FALL QUARTER

	Hrs.	Cr.
Eng. 224, Composition .....	3	3
Physics 112, Mechanics (men) .....	3 (3) 4	
H. E. 110, Sewing (women) .....	(3) 1	
Electives, (major subjects) .....	10	
Electives (women) .....	3	

WINTER QUARTER

	Hrs.	Cr.
Edu. 321, Psychology of Adol. ....	3	3
Physics 113, Heat and Elec., (men) .....	3 (3) 4	
Eng. 225, Composition .....	3	3
H. E. 111, Sewing (women) .....	(3) 1	
Electives (major subjects) .....		7
Electives (women) .....		3

## Oklahoma A. and M. College

## SPRING QUARTER

	Hrs.	Cr.
Edu. 322, Methods of Teaching in High School .....	4	4
Pub. Spk. 230, Argu. and Debate .....		
or		
Pub. Spk. 232, Dramatics .....	3	3
H. E. 112, Sewing, (women) .....	(3)	1
Zool. 213, General .....	3 (6)	5
Electives (major subjects) .....		4
Electives (men) .....		1

## SENIOR YEAR

## FALL QUARTER

	Hrs.	Cr.
Edu. 440, Observation and Practice Teaching .....	1 (6)	3
Edu. 443, Edu. Measurements .....	2 (3)	3
Electives (major subjects) .....		7
Electives .....		4

## WINTER QUARTER

	Hrs.	Cr.
Edu. 441, Observation and Practice Teaching .....	1 (6)	3
Electives (major subjects) .....		9
Electives .....		5

## SPRING QUARTER

	Hrs.	Cr.
Edu. 442, School Administration .....	3	3
Edu. 444, General Sociology .....	3	3
Electives (major subjects) .....		7
Electives .....		4

*Two Major Subjects Required.*—In addition to the prescribed courses, students are required to elect at least 22 quarter hours in each of two of the following departments: Agriculture; Botany and Zoology; Chemistry; Commerce and Marketing; Drawing and Art; English and Speech; French; History and Economics; Home Economics; Latin; Manual Training; Mathematics; Music; Physical Education; Physics and Spanish. These two major subjects should be selected with a view to preparing to teach them in high school. Courses in major subjects must be approved by the heads of the departments involved and by the Dean of the School of Education.

A total of 102 quarter hours is required for completing this course.

### COURSE FOR TEACHERS OF AGRICULTURE LEADING TO B. S. DEGREE AND LIFE HIGH SCHOOL STATE CERTIFICATE

Men in the School of Education desiring to qualify as teachers of agriculture in high schools are required to complete the regular course for B. S. degree and State Life High School Certificate.

*Agriculture Required as Major Subject.*—Instead of electing two major subjects, these men are required to complete at least 40 semester credits in the School of Agriculture, as approved by the Dean of the School of Agriculture.

### COURSE FOR FIVE-YEAR HIGH SCHOOL STATE CERTIFICATE

The twenty-four quarter hours in psychology and education required for this certificate should be selected from the following courses: Edu. 120, 121, 122, 220, 221, 311, 330, 332, 442 and 444. The course in Psychology of Adolescence, Edu. 321, and in Methods of Teaching in High School, Edu. 322, should be included. Graduation from College is required for this certificate.

### COURSE FOR TWO-YEAR HIGH SCHOOL STATE CERTIFICATE

The courses in psychology and education required for this certificate are Edu. 120, Edu. 122 and Edu. 121 or Edu. 220. Two years of regular College work with an aggregate of at least 102 quarter hours including education courses is required.

### COURSE FOR MANUAL TRAINING TEACHERS LEADING TO THE STATE CERTIFICATE

The following two-year course of instruction has been planned to prepare teachers of Manual Training. More than one hundred and ten school plants in Oklahoma have shopwork and require more than two hundred

teachers to man them. This means that there is a steady demand in this State for well prepared teachers of Manual Training. Upon completion of the course outlined below, a student will be recommended to the State Board of Education for the State certificate for Manual Training Teachers. While many Superintendents prefer that a Manual Training Teacher should be a college graduate, holders of this certificate will be qualified to teach in most schools of the State.

## FRESHMAN YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Eng. 130, College .....	3	3	Eng. 131, College .....	3	3
Physics 115, Mechanics .....	2 (3)	3	Physics 116, Heat and Elec. ....	2 (3)	3
Edu. 120, School Hygiene and Management .....	4	4	Edu. 121, Ele. Psychology .....	4	4
M. E. 106, Engr. Drawing .....	(6)	2	M. E. 107, Engr. Drawing .....	(6)	2
Shop 121, Hand W. W. ....	(3)	1	Shop 122, Hand W. W. ....	(3)	1
Shop 131, Wood Turning .....	(3)	1	Shop 132, Wood Turning .....	(3)	1
Shop 141, Mech. Drawing .....	(3)	1	Shop 142, Mech. Drawing .....	(3)	1
Mil. Sci. 101 .....	(3)	1	Mil. Sci. 102 .....	(3)	1
Phy. Edu. 131 .....	(3)	1	Phy. Edu. 132 .....	(3)	1

## SPRING QUARTER

	Hrs.	Cr.
Eng. 132, College .....	3	3
Physics 117, Sound and Light .....	2 (3)	3
Edu. 122, Methods of Teaching the Common Branches .....	4	4
M. E. 108, Eng. Drawing .....	(6)	2
Shop 123, Hand W. W. ....	(3)	1
Shop 213, Pat. Mak. ....	(3)	1
Shop 143, Mech. Drawing .....	(3)	1
Mil. Sci. 103 .....	(3)	1
Phy. Edu. 133 .....	(3)	1

## SOPHOMORE YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Eng. 224, Adv. Composition .....	3	3	Eng. 225, Adv. Comp. ....	3	3
Arch. 127, Elements .....	(3)	1	Arch. 128, Elements .....	(3)	1
Shop 221, Mach. W. W. ....	(3)	1	Shop 222, Mach. W. W. ....	(3)	1
Shop 151, Carpentry .....	(3)	1	Shop 152, Carpentry .....	(3)	1
Shop 231, Care of Shop Equip. ....	1 (2)	1½	Shop 232, Wood Finishing .....	1 (2)	1½
Shop 224, Methods of Teaching Manual Training .....	2 (1)	2½	Edu. 225, Methods of Teaching Manual Training .....	2 (1)	2½
Shop 311, Forging .....	(3)	1	Shop 312, Forging .....	(3)	1
Shop 331, Mach. Shop .....	(3)	1	Shop 332, Mach. Shop .....	(3)	1
Electives .....	4	4	Electives .....	4	4
Mil. Sci. 201 .....	(3)	1	Mil. Sci. 202 .....	(3)	1

## SPRING QUARTER

	Hrs.	Cr.
Arch. 129, Elements .....	(3)	1
Shop 223, Mach. W. W. ....	(3)	1
Shop 153, Carpentry .....	(3)	1
Shop 233, Furniture Design .....	1 (2)	1½
Edu. 226, Methods of Teaching Manual Training .....	2 (1)	2½
Shop 312, Forging .....	(3)	1
Shop 321, Foundry .....	(3)	1
Electives .....	6½	6½
Mil. Sci. 203 .....	1 (2)	1½

A total of 102 quarter hours is required for completing this course. Students who have completed this course may be given major standing in the School of Education.

## COURSE FOR TWO-YEAR ELEMENTARY STATE CERTIFICATE

(Grammar Grade or Common School Certificate.)

The courses in psychology and education required for this certificate are: Edu. 120, Edu. 121, and Edu. 122, and Gen. Agr. 106 and 107. One year of regular college work with an aggregate of at least 51 quarter credits including the education and agriculture courses is required.

*SUBJECTS*

## EDUCATIONAL PSYCHOLOGY

- 121 ELEMENTARY PSYCHOLOGY. Class 4 hours. Credit 4 or 2. Winter Quarter.

When taken later than the Sophomore year, the credit is 2 hours.

Required of candidates for the grammar-grade or two-year certificate.

An introductory course in human psychology, especially adapted to the needs of prospective teachers in elementary schools.

- 220 GENERAL PSYCHOLOGY. Class 4 hours. Credit 4. Fall Quarter.

Not open to Freshmen.

Required of Sophomores in the School of Education.

A systematic course in the fundamental principles of psychological psychology.

- 221 EDUCATIONAL PSYCHOLOGY. Class 4 hours. Credit 4. Winter Quarter.

Prerequisite: Edu. 220.

Required of Sophomores in the School of Education.

A course dealing with the applications of psychological psychology to educational problems.

- 222 PSYCHOLOGY OF CHILDHOOD. Class 3 hours. Credit 3.

Prerequisite: Edu. 220.

A study of physiological and psychological development during the period of childhood, with special emphasis upon child problems facing parents and elementary school teachers.

- 321 PSYCHOLOGY OF ADOLESCENCE. Class 3 hours. Credit 3. Winter Quarter.

Prerequisite: Edu. 203.

A study of physiological and psychological development during the period of adolescence, with special emphasis upon problems facing parents and high school teachers.

- 323 EXPERIMENTAL PSYCHOLOGY. Class 1 hour, laboratory 3 hours. Credit 2.

An introductory course in laboratory psychology. Individual and group experiments upon typical psychological problems.

- 324 EXPERIMENTAL EDUCATION. Class 1 hour, laboratory 3 hours. Credit 2.

Prerequisite: Edu. 323.

The method and result of typical experiments in the several fields of experimental education, illustrated by individual and group experiments.

- 325 SOCIAL PSYCHOLOGY. Class 3 hours. Credit 3.

Prerequisite: Edu. 220.

A study of human nature from the standpoint of social behavior.

- 448 MENTAL TESTS. Class 2 hours, laboratory 3 hours. Credit 3.

Prerequisite: Edu. 220 and Edu. 221.

A quantitative study of psychical processes with practice in the giving of several of the more standard forms of intelligence tests.

## EDUCATIONAL PHILOSOPHY

- 320 HISTORY OF EDUCATION. Class 4 hours. Credit 4. Fall Quarter.

Not open to Freshmen.

Required of Juniors in the School of Education.

The history of educational ideals and practices, with special emphasis upon the modern periods.

326 RURAL EDUCATION. Class 3 hours. Credit 3.

Given regularly in Summer School.

The special problems of education in the country, with a detailed study of school consolidation and the county unit of administration.

327 EDUCATIONAL CLASSICS. Class 3 hours. Credit 3.

Prerequisite: Edu. 320.

A first hand acquaintance with some of the educational literature of Plato, Rousseau, Spencer, Hall and Dewey.

444 GENERAL SOCIOLOGY. Class 3 hours. Credit 3.

Spring Quarter.

Open to Juniors and Seniors.

Required of Seniors in the School of Education.

A brief survey of functional sociology with special emphasis upon the home and the school as examples of social institutions.

445 RURAL SOCIOLOGY. Class 3 hours. Credit 3.

Not open to Freshmen.

A study of sociological conditions and problems in rural life.

446 ETHICS AND MORAL EDUCATION. Class 3 hours. Credit 3.

Open to Juniors and Seniors.

A study of fundamental moral principles and their application to education.

447 PHILOSOPHY OF EDUCATION. Class 3 hours. Credit 3.

An advanced course intended especially for graduate students in the School of Education.

A comparative study of the leading philosophies of education of recent times, including idealism, naturalism, and pragmatism.

449 VOCATIONAL EDUCATION. Class 3 hours. Credit 3.

Prerequisite: Edu. 220.

A brief history of the vocational ideal in education, together with a study of current problems in vocational guidance and training.

EDUCATIONAL ADMINISTRATION

120 SCHOOL HYGIENE AND MANAGEMENT. Class 4 hours. Credit 4 or 2. Fall Quarter.

When taken later than the Sophomore year the credit is 2 hours.

Required of Freshmen in the School of Education, candidates for the two-year high school certificate, and candidates for the grammar-grade or two-year certificate.

The application of physiological laws to education, together with a study of class-room management.

442 SCHOOL ADMINISTRATION. Class 3 hours. Credit 3. Spring Quarter.

Prerequisite: Edu. 322.

Required of Seniors in the School of Education.

A course dealing with typical problems of high school principals and superintendents of public school systems.

443 EDUCATIONAL MEASUREMENTS. Fall Quarter. Class 2 hours, laboratory 3 hours. Credit 3.

Prerequisite: Edu. 220 and 221.

Required of Seniors in the School of Education.

A study of some of the more important quantitative standards used in measuring progress in school subjects, including practice in their use.

501 SEMINAR IN EDUCATION. Class 2 hours. Credit to be arranged.

An advanced course intended especially for graduate students in the School of Education.

Thesis problems of individual students are reported upon and discussed.

502 SCHOOL SURVEYS. Class 2 hours. Credit to be arranged.

An advanced course intended especially for graduate students in the School of Education.

An intensive study of typical educational surveys.

#### EDUCATIONAL METHODS

122 METHODS OF TEACHING THE COMMON BRANCHES. Class 4 hours. Credit 4 or 2. Spring Quarter.

When taken later than Sophomore year, the credit is 2 hours.

Required of Freshmen in the School of Education, candidates for the two-year high school certificate, and candidates for the grammar-grade two-year certificate.

A course dealing with special methods of teaching the subjects in the curriculum of elementary schools.

123 METHODS OF TEACHING MUSIC IN ELEMENTARY GRADES. Class 3 hours. Credit 3. Spring Quarter.

Required of Freshmen in the School of Education.

A course dealing with modern methods of teaching music in elementary grades.

223 METHODS OF TEACHING IN PRIMARY GRADES. Class 3 hours. Credit 3.

Given regularly in Summer School.

A study of general and special methods used in the first three grades, with some attention to kindergarten methods.

224 METHODS OF TEACHING MANUAL TRAINING. Class 2 hours, practice 1 hour. Credit  $2\frac{1}{3}$ . Fall Quarter.

Required of Sophomores taking course for manual training teachers. Lectures on methods of teaching and organization of the subject matter are given each week, and students are required to assist in shop classes one hour each week for practice teaching.

Text—Allen: The Instructor, The Man, and The Job.

225 METHODS OF TEACHING MANUAL TRAINING. Class 2 hours, practice 1 hour. Credit  $2\frac{1}{3}$ . Winter Quarter.

Required of Sophomores taking course for manual training teachers.

A study of different types of manual training, such as prevocational, vocational, and trade, with special emphasis upon methods of teaching each.

Text—Leavitt: Examples of Industrial Education.

226 METHODS OF TEACHING MANUAL TRAINING. Class 2 hours, practice 1 hour. Credit  $2\frac{1}{3}$ . Spring Quarter.

Required of Sophomores taking course for manual training teachers. A thorough study of courses of study, shop equipment, shop plans, supplies and related subjects with a view to their use in properly teaching manual training.

Text—Griffith: Correlated Courses in Woodwork and Mechanical Drawing.

322 METHODS OF TEACHING IN HIGH SCHOOL. Class 4 hours. Credit 4. Spring Quarter.

Prerequisite: Edu. 220.

Required of Juniors in the School of Education.

A course dealing with special methods of teaching the subjects in the high school curriculum, together with some general principles of high school education.

328 METHODS OF TEACHING ENGLISH IN HIGH SCHOOL. Class 3 hours. Credit 3.

Open to Juniors and Seniors with prerequisites in English.

This course should be taken by prospective teachers of English in high schools.

440 OBSERVATION AND PRACTICE-TEACHING. Class 1 hour, laboratory 6 hours. Credit 3. Fall Quarter.

Required of Seniors in the School of Education.

Students in the School of Education are required to do observation and practice-teaching in the two subjects in which they are majoring. The Secondary School of the Oklahoma A. and M. College is used for this purpose, and the work is under the supervision of the Principal of the Secondary School. Students should arrange with him for their hours for observation and practice-teaching before enrolling in the course.

441 OBSERVATION AND PRACTICE-TEACHING. Class 1 hour, laboratory 6 hours. Credit 3. Winter Quarter.

Required of Seniors in the School of Education.

A continuation of Edu. 440.



**SCHOOL OF COMMERCE AND MARKETING**



## FACULTY

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JAMES BURNETTE ESKRIDGE, A. M., Ph. D.; *President of the College.*

HENRY FULLER HOLTZCLAW, A. B., Ph. D.; *Dean of the School of Commerce and Marketing, Professor of Economics.*

AVERY LUVERE CARLSON, B. A., M. A., J. D.; *Professor of Business Administration.*

WILLARD RUDE, *Associate Professor of Secretarial Training.*

.....; *Associate Professor of Commerce.*

\*HENRY HAROLD MELTSNER, B. A.; *Assistant Professor of Accounting.*

.....; *Assistant Professor of Economics.*

\*\*CHARLES MEEKS ANDERSON, M. A.; *Instructor in Economics.*

ELSIE D. HAND, *Special Lecturer in Library Practice.*

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RICHARD GAINES TYLER, C. E., B. S. in C. E.; *Dean of School of Engineering, Professor of Civil Engineering.*

CARL GUNDERSEN, A. B., A. M., Ph. D.; *Professor of Mathematics.*

EDWARD CLARK GALLAGHER, B. S.; *Director of Athletics, Professor of Physical Education.*

\*\*HILTON IRA JONES, A. B., A. M., Ph. D.; *Professor of Chemistry.*

ALBERT SAMUEL HIATT, A. B.; *Professor of History.*

JOHN HOFER CLOUD, A. B., A. M., Ph. D.; *Professor of Physics.*

ALMON AI ARNOLD, A. B., A. M.; *Professor of Modern Languages.*

DAVID TERRY MARTIN, A. B.; *Professor of Public Speaking.*

WILLIAM BENJAMIN PARKS, A. M., S. M., Ph. D.; *Professor of Chemistry.*

WILLIAM PTOLEMY POWELL, B. A., M. A.; *Professor of English.*

WILLIAM JASPER MILLER, E. E., S. M. E. E.; *Professor of Electrical Engineering.*

LEROY ALONZO WILSON, M. E., M. M. E.; *Professor of Mechanical Engineering.*

RUTH DuBOIS, A. B.; *Professor of Physical Education for Women.*

JOSEPH BENJAMIN PATE, B. A., Major, Inf., U. S. Army; *Commandant, Professor of Military Science and Tactics.*

JOSEPH HOWARD RUSTEMEYER, Captain, Inf., U. S. Army; *Professor of Military Science and Tactics.*

JOSEPH JOHN SCHMIDT, Captain, Inf., U. S. Army; *Professor of Military Science and Tactics.*

JOHN MARVIN HAGENS, Captain, Inf., U. S. Army; *Professor of Military Science and Tactics.*

ROBERT E HARTSOCK, S. B., A. B.; *Professor of Mathematics.*

ROBERT DUBOIS, B. A., M. S.; *Associate Professor of Chemistry.*

GRACE MOUNTCASTLE, Ph. B.; *Associate Professor of English.*

AGNES BERRIGAN, B. A., M. A.; *Associate Professor of English.*

JAMES HENRY CALDWELL, *Assistant Professor of History.*

EWALD W SCHUHMANN, A. B., A. M.; *Assistant Professor of Physics.*

ELLIS C. BAKER, B. S.; *Assistant Professor of Mechanical Engineering.*

CHARLES LESLIE NICKOLLS, B. S., M. S.; *Assistant Professor of Chemistry.*

THOMAS MALCOLM AYCOCK, B. S.; *Assistant Professor of Physical Education.*

JAMES HAROLD MURDOUGH, S. B.; *Assistant Professor of Civil Engineering.*

CHARLES VICTOR BULLEN, B. S.; *Instructor in Electrical Engineering.*

HARRIET RUBY ENSWORTH, Ph. B.; *Instructor in English.*

\*Resigned.

\*\*Leave of absence.

## SCHOOL OF COMMERCE AND MARKETING

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The School of Commerce and Marketing was established in 1914 in response to a widespread demand for scientific and technical training in business. The school was organized in recognition of the fact that business had come to be a profession requiring as systematic and scientific training as the other leading professions. To this end opportunity is afforded the student to do considerable work in the pure and applied sciences and cultural studies, as well as to receive technical training in the field of economics, commerce, marketing and secretarial training.

The necessity for collegiate training for a business career is now an accepted fact. Training in "scattered business subjects" and in the "school of experience" was defensible enough in the earlier days when a high school education was considered the maximum education necessary for the individual planning a life's career. However, such methods cannot be permanent. With the business world becoming increasingly complex, due to the application of mathematics, physics, and scientific learning to the production, administration, and distribution of commodities of commerce and with the ramifications of modern business extending into all walks of life, the need for scientific, systematic, business training is apparent. "Business is, after all, merely an organized scheme of gratifying human wants, and, properly understood, falls little short of being as broad, as inclusive, as life itself in its motives, aspirations and social obligations. It falls little short of being as broad as all science in its technique."

Accordingly, the courses of study in this school are so arranged as to offer liberal opportunities for the student to prepare for many of the highly specialized vocations as well as for independent business activity. In the belief that success in business requires sound reasoning in economic theory every student is required to take a course in principles of economics, before specializing in the advanced courses in commerce and marketing. The diversification of training offered by this College and the close cooperation existing between all schools and departments enable every properly quali-

fied student to select from a wide range of electives. Among the many different fields of activity for which the student may receive training in the School of Commerce and Marketing, the following are typical: High school and college teaching, secretarial work, office management, bookkeeping and accounting, banking and finance, merchandising, marketing, commercial agriculture, personnel administration, administrative engineering, industrial management, transportation and foreign trade.

#### *OF SPECIAL INTEREST TO WOMEN*

Women are admitted to all courses in the School of Commerce and Marketing on the same basis as men. The necessity of business training for home-making and commercial teaching as well as for industrial pursuits is now well recognized. To meet this need, a number of courses of special interest to women are offered. In addition to the required subjects, the student may elect liberally from courses offered in the schools of Home Economics, Agriculture, Science and Literature and may take sufficient work in the School of Education to qualify for any of the State Teachers' Certificates listed in the announcement of that school.

#### *ADVANCED STANDING*

Graduates from the two-year course of the Oklahoma State Normal Schools will be admitted to Junior standing. Students from other colleges will be admitted subject to the general regulations of the College and will receive such standing as their previous training entitles them.

#### *ENGLISH REQUIREMENT*

All students in the School of Commerce and Marketing are required to complete two years of instruction in English. Students whose use of the English language is below the standard may be required to take additional work in this subject.

#### *ADMISSION REQUIREMENTS*

For admission to the School of Commerce and Marketing as a candidate for a degree or certificate, fifteen units of high school or secondary school work are required. Applicants who offer fourteen units in accordance with the general requirements for admission will be granted freshman standing, but will be conditioned in one unit which must be made up by the end of the first year. Persons of mature age who are not candidates for a degree or certificate

may enroll as special students and may pursue such work as they are prepared to take. Applicants who do not meet any of the above requirements may enroll in the secondary school and elect a limited number of courses in Secretarial Training.

#### *STATEMENTS, CERTIFICATES AND DEGREES*

Any student who satisfactorily completes a subject will, on request, be given a statement to that effect.

Students who complete the two-year secretarial training course and who comply with the other requirements of the College will be awarded a special certificate in secretarial training.

Students who complete the four-year commerce and marketing course and who comply with the other requirements of the College will be awarded the degree of Bachelor of Science in Commerce.

Students who complete the four-year administrative engineering course and who comply with the other requirements of the College will be awarded the degree of Bachelor of Science in Administrative Engineering.

Graduate students who complete the equivalent of one year's work subject to the rules and regulations for graduate study and who comply with the other requirements of the College will be awarded the degree of Master of Science.

#### *THE SUMMER SCHOOL*

A large number of courses are offered in the summer school and many of these courses are of special interest to the teacher of the social sciences. For detailed information, write to the Director of the Summer School.

#### *CORRESPONDENCE-STUDY*

A variety of courses are offered by correspondence. Complete information about the courses may be received by writing to the Dean of the School of Correspondence-Study.

#### *SPECIAL LECTURES*

During 1921-22 special lectures on insurance, advertising and selling, transportation, practical banking, immigration and personnel management were given. Special lectures on library practice, employment methods, and job analysis have been arranged for 1922-23. Other lectures by prominent business men will be given.

*CLUBS AND SOCIETIES*

The Commerce Club admits to membership all students registered in the School of Commerce and Marketing. Its purpose is to provide social and educational advantages for its members and to promote investigation and discussion of both general and special subjects in the field of economics, commerce, marketing, and secretarial training.

Tau Chapter of Alpha Kappa Psi, national professional fraternity in commerce organized in 1904 at New York University, was installed at the Oklahoma A. and M. College in 1920. Its purpose is to foster scientific research in the field of commerce. Membership is limited to upperclassmen and is based on scholarship, personality and qualities of leadership.

The Order of Gregg Artists is a national organization composed of shorthand writers whose notes show artistic merit. A local order has been organized, the object of which is to create and maintain interest in all phases of shorthand work. Students who have attained a certain degree of skill in writing shorthand may become members. An employment department for its members is a feature of the work.

*STUDENT PUBLICATION*

The Commerce News is a magazine published bi-monthly by the students of the School of Commerce and Marketing under the supervision of the faculty of the school. Articles of merit are contributed by prominent business men and by both the general faculty and the student body.

*POSITIONS*

Students should not get the impression that they can step immediately into a responsible executive position upon the completion of their course of study. The aim of all instruction in the school is to furnish the business facts and theory which the beginner finds it difficult to secure in early business experience. No pretense is made to cover the detailed technique and routine of particular industries since these may be acquired only in actual experience. It is expected, therefore, that graduates of the school will be obliged to learn many of the practical details and special technique of the industry or vocation which they enter. The instruction in this school emphasizes training in the fundamental business and economic facts, in the belief that graduates will be able to avoid many

mistakes and to make rapid progress in their chosen vocations. The school cannot guarantee a position but students who graduate with good records are assisted and usually have little difficulty in finding suitable, permanent employment.

### COMMERCE AND MARKETING COURSE

The following outline indicates the prescribed work in the School of Commerce and Marketing leading to the degree of Bachelor of Science in Commerce. For this degree 204 quarter credit hours, including military science and physical education, are required. No student will be allowed to register for less than 12 or more than 20 quarter credit hours without the consent of the Board of Deans. In the outline, figures in parenthesis indicate hours of laboratory work; figures without parenthesis indicate hours of class work and hours of credit. The courses are numbered beginning with 100 in the Freshman year; 200 in the Sophomore year; 300 in the Junior year, and 400 in the Senior year. Economics 218 is a prerequisite for all courses listed after the first quarter of the Sophomore year.

#### FRESHMAN YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Eng. 130, College .....	3	3	Eng. 131, College .....	3	3
Com. 106, Com. Algebra .....	3	3	Com. 107, Bus. Math. ....	3	3
Hist. 106, Modern European .....	3	3	Hist. 107, Ind. Hist. of Eng. ....	3	3
Chem. 106, Gen. Inorganic, or			Chem. 107, General Inorganic, or		
Physics 112, Mechanics .....	3 (3)	4	Physics 113, Heat and Elec. ....	3 (3)	4
S. T. 110, Typewriting .....	(6)	2	S. T. 111, Typewriting .....	(6)	2
Phy. Edu. 131 .....	(3)	1	Phy. Edu. 132 .....	(3)	1
Mil. Sci. 101 .....	(3)	1	Mil. Sci. 102 .....	(3)	1

#### SPRING QUARTER

	Hrs.	Cr.
Eng. 132, College .....	3	3
Com. 108, Math. of Investments ....	3	3
Hist. 108, Ind. Hist. of U. S. ....	3	3
Chem. 108, General Inorganic, or		
Physics 114, Sound and Light .....	3 (3)	4
S. T. 112, Typewriting .....	(6)	2
Phy. Edu. 133 .....	(3)	1
Mil. Sci. 103 .....	(3)	1

#### SOPHOMORE YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Eng. 224, Composition .....	3	3	Eng. 225, Composition .....	3	3
Com. 218, Intro. to Acctg. ....	2 (3)	3	Com. 219, Prin. of Acctg. ....	2 (3)	3
Econ. 218, Principles .....	3	3	Econ. 219, Current Econ. Prob. ....	3	3
Com. 221, Bus. Adm. ....	3	3	Com. 222, Bus. Adm. ....	3	3
Phy. Edu. 231, (women) .....	(3)	1	Phy. Edu. 232, (women) .....	(3)	1
Mil. Sci. 201 .....	(3)	1	Mil. Sci. 201 .....	(3)	1
Elective* .....		4	Elective* .....		4

#### SPRING QUARTER

	Hrs.	Cr.
Eng. 235, Essays .....	3	3
Com. 220, Accounting Practice .....	2 (3)	3
Econ. 220, Bus. Statistics .....	3	3
Econ. 221, Fin. Organization .....	3	3
Phy. Edu. 233, (women) .....	(3)	1
Mil. Sci. 203 .....	(3)	1½
Elective* .....	4	4

#### JUNIOR YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Com. 330, Business Law .....	3	3	Com. 311, Business Law .....	3	3
Rural Econ. 301, Prin. of			Rural Econ. 305, Rural Soci. ....	3	3
Agri. Economics .....	3	3	Com. 337, Business Organization	3	3
Mktg. 330, Prin. of Mktg. ....	3	3	Electives** .....		8
Electives** .....		8			

SPRING QUARTER

	Hrs.	Cr.
Com. 332, Business Law .....	3	3
Rural Econ. 410, Efficient Marketing for Agriculture .....	3	3
Mktg. 331, Advertising and Salesmanship .....	3	3
Electives** .....	8	

SENIOR YEAR

FALL QUARTER

	Hrs.	Cr.
Econ. 440, Public Finance .....	3	3
Hist. 412, Gov. and Pol. Methods .....	4	4
Electives*** .....	3	3
Electives** .....	7	

WINTER QUARTER

	Hrs.	Cr.
Econ. 442, Trans. ....	3	3
Hist. 413, Pol. Theory .....	5	5
Electives*** .....	3	3
Electives** .....	6	6

SPRING QUARTER

	Hrs.	Cr.
Mktg. 440, Foreign Trade .....	3	3
Hist. 414, Cont. World Hist. ....	5	5
Electives*** .....	3	3
Electives** .....	6	6

\*All electives in the Sophomore year must be taken outside of the School of Commerce and Marketing and are subject to the approval of the Dean.

\*\*All electives are subject to the approval of the Dean.

\*\*\*Elective in the School of Commerce and Marketing.

ADMINISTRATIVE ENGINEERING COURSE

The Administrative Engineering course is a combined course in engineering and commerce and is offered in response to the exacting demand for men with collegiate training in the fundamental branches of both sciences. The business world is demanding men who have had technical training in engineering. Accordingly, engineers find themselves handicapped by their lack of training in the administrative aspects of their profession. The course is planned so that the student may secure the bachelor's degree in Administrative Engineering in the School of Commerce and Marketing and may, by one year of additional work, complete the requirements for any one of the degrees in the School of Engineering. The requirements for admission to this course are the same as the requirements for admission to the School of Engineering.

FRESHMAN YEAR

FALL QUARTER

	Hrs.	Cr.
Math. 112, College Algebra .....	3	3
Math. 114, Trigonometry .....	3	3
Eng. 130, College .....	3	3
Chem. 106, Inorganic .....	3 (3)	4
Draw. 106, Engineering .....	(6)	2
S. T. 110, Typewriting .....	(6)	2
Phy. Edu. ....	(3)	1
Mil. Sci. ....	(3)	1

WINTER QUARTER

	Hrs.	Cr.
Math. 113, College Algebra .....	3	3
Math. 115, Analytics .....	3	3
Eng. 131, College .....	3	3
Chem. 107, Inorganic .....	3 (3)	4
Draw. 107, Engineering .....	(6)	2
S. T. 111, Typewriting .....	(6)	2
Phys. Edu. ....	(3)	1
Mil. Sci. ....	(3)	1

SPRING QUARTER

	Hrs.	Cr.
Hist. 108, Ind. Hist. of U. S. ....	3	3
Math. 116, Analytics .....	3	3
Eng. 132, College .....	3	3
Chem. 108, Inorganic .....	3 (3)	4
Draw. 108, Elements of Drafting ...	(6)	2
S. T. 112, Typewriting .....	(6)	2
Phy. Edu. ....	(3)	1
Mil. Sci. ....	(3)	1

SOPHOMORE YEAR

FALL QUARTER

	Hrs.	Cr.
Math. 210, Calculus .....	3	3
Physics 115, Mechanics .....	2 (3)	3
Eng. 224, Composition .....	3	3
Chem. 225, Tech. Analysis .....	1 (3)	2
M. E. 206, Descriptive Geometry ..	3	3
Shop 212, Pattern Making .....	(3)	1
Econ. 218, Principles .....	3	3
Mil. Sci. ....	(3)	1

WINTER QUARTER

	Hrs.	Cr.
Math. 211, Calculus .....	3	3
Physics 116, Heat and Elec. ....	2 (3)	3
Eng. 225, Composition .....	3	3
Chem. 226, Tech. Analysis .....	1 (3)	2
Shop 213, Advanced Pattern Making .....	(3)	1
Econ. 219, Cur. Econ. Prob. ....	3	3
Com. 219, Prin. of Acctg. ....	2 (3)	3
Mil. Sci. (men) .....	(3)	1

## SPRING QUARTER

	Hrs.	Cr.
Math. 212, Calculus .....	3	3
Physics 117, Sound and Light .....	2 (3)	3
Chem. 227, Technical Analysis .....	1 (3)	3
Shop 321, Foundry .....	(3)	1
C. E. 209, Surveying .....	1 (3)	2
Econ. 220, Financial Organization .....	3	3
Com. 220, Accounting Practice .....	2 (3)	3
Mil. Sci. ....	1 (2)	1½

Junior and Senior years to be arranged.

## SECRETARIAL TRAINING COURSE

The following two-year college course of instruction is offered especially for students seeking training in secretarial work. It is designed to prepare high school graduates for positions as bookkeepers, stenographers, office assistants, typists, private secretaries, or teachers of commercial branches in small high schools. On completion of the prescribed course of study which includes 102 quarter hours, a special certificate in secretarial training will be granted. The student, after completing the course, is privileged to continue work and will be given Junior standing in the School of Commerce and Marketing. However, it will be necessary for such student to fulfill all the requirements of the four-year course in order to receive the Bachelor's degree.

## FRESHMAN YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Eng. 130, College .....	3	3	Eng. 131, College .....	3	3
Com. 106, Commercial Algebra ....	3	3	Com. 107, Bus. Math. ....	3	3
Hist. 106, Modern Europe .....	3	3	Hist. 107, Ind. Hist. of Eng. ....	3	3
S. T. 106, Beginners Shorthand .....	5	3	S. T. 107, Inter. Shorthand .....	5	3
Econ. 218, Prin. of Econ. ....	3	3	S. T. 111, Typewriting .....	(6)	2
Phy. Edu. 131 .....	(3)	1	Econ. 219, Cur. Econ. Prob. ....	3	3
S. T. 110, Typewriting .....	(6)	2	Phy. Edu. 132 .....	(3)	1
Mil. Sci. 101 .....	(3)	1	Mil. Sci. 102 .....	(3)	1

## SPRING QUARTER

	Hrs.	Cr.
Com. 108, Math. of Investment .....	3	3
Hist. 108, Ind. Hist. of U. S. ....	3	3
Eng. 132, College .....	3	3
S. T. 108, Beginners Dictation .....	5	3
S. T. 112, Typewriting .....	(6)	2
P. Spk. 130, Essentials .....	3	3
Phy. Edu. ....	(3)	1
Mil. Sci. 103 .....	(3)	1

## SOPHOMORE YEAR

FALL QUARTER			WINTER QUARTER		
	Hrs.	Cr.		Hrs.	Cr.
Eng. 224, Adv. Comp. ....	3	3	Eng. 225, Adv. Comp. ....	3	3
Com. 218, Intro. to Acctg. ....	2 (3)	3	Com. 219, Prin. of Acctg. ....	2 (3)	3
Com. 221, Bus. Adm. ....	3	3	Com. 222, Bus. Adm. ....	3	3
S. T. 218, Adv. Dict. ....	5	3	S. T. 219, Bus. Cor. ....	3	3
Elective** .....	4	4	Elective** .....	4	4
Phy. Edu. 231, (women) .....	(3)	1	Phy. Edu. 232, (women) .....	(3)	1
Mil. Sci. 201 .....	(3)	1	Mil. Sci. 201 .....	1 (2)	1½

## SPRING QUARTER

	Hrs.	Cr.
Eng. 227, Bus. Eng. ....	3	3
Com. 220, Acctg. Practice ..	2 (3)	3
Com. 443, Bus. Law .....	3	3
S. T. 220, Office Training .....	3	3
Elective** .....	4	4
Phy. Edu. 233, (women) .....	(3)	1
Mil. Sci. 203 .....	(2)	1

\*Women students may substitute Econ. 333 (Women in Industry) for Com. 222.

\*\*Students who desire to receive a state teachers certificate must elect Education 120-121-122 and Agriculture 106-107.

**SUBJECTS**

**ECONOMICS GROUP**

**106 COMMERCIAL GEOGRAPHY.** Class 3 hours. Credit 3.

This is an introductory course and serves as a basis for further work in economics, commerce and marketing. A study of the influence of physical environment on economic and social development is followed by a topical consideration of the leading articles of commerce. The chief products studied are the cereals, starch foods, vegetables, fruits, sugar, tobacco, mineral products, and manufactured articles. Attention also is given to trade routes and to international commerce. The course is of value to teachers of geography as well as to students preparing for further work in the social sciences.

**218 PRINCIPLES OF ECONOMICS.** Class 3 hours. Credit 3.

This is the introductory course in the field of economics. The purpose is to furnish the beginner with a thorough training in the fundamental principles of the science. The course is designed for students who can take no further work in economics and also serves as a foundation for more advanced work. While the science of economics continually is changing with the progress in industrial life, in legislation, in economic thought, and in commercial activity, the basic principles underlying all these activities are relatively permanent. The aim of this course is to supply the student with a framework into which he may fit the facts and phenomena of economic activity which come with experience in industrial society. A brief rapid survey of the historical evolution of economic society is made; and this is followed by a detailed treatment of the science of economics according to the four usual divisions: production, consumption, exchange, and distribution.

**219 CURRENT ECONOMIC PROBLEMS.** Class 3 hours. Credit 3.

This course treats in detail the application of the principles of economics considered in Economics 218 to the problems of today. Some of the subjects studied are money and banking, credit, international trade, wages, organized labor, transportation, insurance, and public finance.

**220 BUSINESS STATISTICS.** Class 3 hours. Credit 3.

This is a study of the statistical methods of investigating economic and business problems and covers the stages of analysis from the collecting and assembling of data to their use and interpretation as a finished product.

**221 FINANCIAL ORGANIZATION OF SOCIETY.** Class 3 hours. Credit 3.

The purpose of this course is to give the student an understanding of the nature and work of the various types of financial institutions in the modern business world, of the forces that have led to their development, and of their relation to the organization of industrial society. The principal forms of financial institutions covered are: Coinage and monetary systems; credit; commercial banks; savings banks; bond houses; trust companies; stock exchanges; and the various forms of cooperative credit associations.

**330 MONEY AND BANKING.** Class 3 hours. Credit 3.

This is an advanced study in the field of money and banking. The first half of the course covers in general the origin and development of money, early expedients for increasing the currency, bimetallism, government paper money, the silver movement, and the control of price levels. The remainder of the course is devoted to a detailed study of some of our banking problems including the various forms and services of banks, the nature and functions of credit, the instruments of commercial credit, principles of commercial banking, analysis of bank loans, the Federal Reserve System and miscellaneous banking agencies.

**331 INVESTMENTS.** Class 3 hours. Credit 3.

Every individual in society is dependent to a certain extent upon investments. With the rapid expansion of business and the extensive sale of numerous kinds of stocks and bonds, with corporations, underwriting firms, and the various governmental divisions frequently issuing bonds of all kinds, the problem of sound investment has become a highly complicated and technical science. This course covers in a general way the fundamental principles used in analyzing investment offerings.

**332 PRINCIPLES OF INSURANCE.** Class 3 hours. Credit 3.

This is an introductory course in the principles of life and property insurance. The student is taken through the leading principles of legal reserve and fraternal life insurance companies, with attention to the technical practices. He then is given a rapid survey of the business of fire and property insurance companies, with a view to giving him some understanding of the methods of handling the risk elements in business.

**333 WOMEN IN INDUSTRY.** Class 3 hours. Credit 3.

The work of women for wages under a competitive organization of industry presents a problem of compelling interest. Women have, of course, always worked, but they have not always worked for wages. In this course an inquiry will be made into the history of women's work and a consideration of their early attitude toward such work, together with a study of the status of their employment during the last century.

**440 PUBLIC FINANCE.** Class 3 hours. Credit 3.

The work in public finance deals in general with public revenues and public expenditures. A detailed study is made of the United States Revenue Act of 1921, followed with some practice in the preparation of individual and corporation income tax returns. The work continues with a somewhat detailed investigation of the various methods of raising public revenues, including a rapid survey of English public finance. A study then is made of the development of taxation methods, with special attention to the general property tax, personal taxes, war profit, excess profit taxes, and the general subject of public credit, with special reference to the world war debts and the problem of financial administration.

**441 LABOR PROBLEMS.** Class 3 hours. Credit 3.

The aim of this course is to present the important facts in the history of organized labor in the United States, to analyze the chief problems which directly or indirectly affect the labor organizations of the present decade and to evolve the functions of organized labor in the industrial and political world. The aim is not to justify or condemn the practices and ideals of organized labor or of employers associations but to analyze the phenomena of which the practices and ideals are the visible manifestations. Labor organizations, employers associations, strikes, lockouts, boycotts, the demand for the closed shop, the sweating system, and the ideals and points of view of organized labor and capital are evolved through the play of social force working within the economic field.

**442 TRANSPORTATION.** Class 3 hours. Credit 3.

This course deals in general with the historical and financial development of the American railroad system to the present time. The aim is to give a broad survey of the administrative organization and operation of the railroads. To this end, the development of the system is traced from the early lines radiating from Boston, through their gradual extension westward, and expansion into the present system with its complicated classification of lines by territory and by ownership. The work then continues with a study of railway corporate organization, receiverships, reorganization, pools, combi-

nations, and inter-railway agreements, earnings, and operation problems. The work concludes with a detailed study of war time administration, reconstruction and adjustment policies, with special attention to the Transportation Act of 1920.

443 RAILROAD RATES. Class 3 hours. Credit 3.

The aim of this course is to furnish some appreciation of the relation of railroad rates to business activity. The development of any community is dependent to a surprising extent upon adjustments of railroad rates. The business administrator is directly affected by rate making. The course is designed to furnish a systematic training for young men and women who desire to enter railway employment, or who are preparing for work in traffic management. The study begins with a brief and rapid survey of the history of transportation in the United States. The theory of railway rates, and rate making in practice, then are studied in detail.

490 SEMINAR. Credit 1 to 3.

The purpose of this course is to encourage and direct research work in economics, commerce, and marketing. It is open to graduate and advanced students.

491 SEMINAR. Credit 1 to 3.

This is a continuation of Econ. 490.

492 SEMINAR. Credit 1 to 3.

This is a continuation of Econ. 491.

COMMERCE GROUP

106 COMMERCIAL ALGEBRA. Class 3 hours. Credit 3.

In this course the student is given an introduction to mathematics as applied to business. It is planned for students who have had one year of high school algebra. The topics considered include a brief review of the principles of algebra followed by thorough work in quadratics, progressions, ratio, variations, logarithms, permutations, combinations, graphical representations and graphical solutions of equations.

107 BUSINESS MATHEMATICS. Class 3 hours. Credit 3.

The purpose of this course is to give first year college students a thorough grasp of the computations required in organized business. It covers those calculations involved in a thorough study of simple and compound interest, depreciation, profits, averages, percentages, discounts, and foreign and domestic exchange.

108 MATHEMATICS OF INVESTMENT. Class 3 hours. Credit 3.

This course gives a broad knowledge of the application of mathematics to the needs of the business and industrial world, including building and loan associations, bond values, sinking funds, amortization, life insurance, and annuities. In this course, the student will receive the essential mathematical training required in a business career.

218 INTRODUCTION TO ACCOUNTING. Class 2 hours, laboratory 3 hours. Credit 3.

This is a thorough but rapid study of the general principles of bookkeeping and accounting. It is designed for students beginning the study of accounting and serves as an aid to those who desire to familiarize themselves with an accounting system adapted to their particular needs. Students without previous training in bookkeeping will be admitted to this course.

**219 PRINCIPLES OF ACCOUNTING.** Class 2 hours, laboratory 3 hours. Credit 3.

This is a study of accounting principles and their correct application to business records. Laboratory work on the general journal, the sales and purchase books and the ledger is given. The preparation of trial balances, profit and loss, and financial statements are also required.

**220 ACCOUNTING PRACTICE.** Class 2 hours, laboratory 3 hours. Credit 3.

This is a continuation of Commerce 219 and includes adjustment entries, summary statements, classification of accounts, the handling of cash, controlling accounts and the application in detail of accounting principles to partnership and corporation problems.

**221 BUSINESS ADMINISTRATION.** Class 3 hours. Credit 3.

This course presents a general survey of the problems confronting the business manager. The purpose is to give an introductory view of the methods he uses in accomplishing these tasks. Among the topics considered are plant location, the administration of personnel, the administration of market problems and the administration of finance.

**222 BUSINESS ADMINISTRATION.** Class 3 hours. Credit 3.

This is a more intensive study of some of the problems of management begun in 221. In addition, a study will be made of organization, management, plant equipment, administration of production and risk bearing.

**330 BUSINESS LAW.** Class 3 hours. Credit 3.

This is an introductory course in law. The purpose is to give a general knowledge of the legal rules which govern business transactions. No attempt is made to train students for the active practice of law. All courses in law in this school are directed towards training for the business world. This particular course covers the origin and development of the common law system in England and its spread throughout the English speaking world. The leading principles of the law of torts, contracts, agency and property are drawn from the study of cases.

**331 BUSINESS LAW.** Class 3 hours. Credit 3.

The aim of this course, like the other courses in business law, is to provide a systematic training in the legal rules which govern business transactions. The specific branches of the law considered are: Bailments, sales, contracts to sell, practices prejudicial to a competitor or to the public, legislative regulation of market practices, bills, notes and checks, liens, mortgages, guaranty and suretyship and statutes covering the above branches of the law. The legal principles are drawn from the study of cases.

**332 BUSINESS LAW.** Class 3 hours. Credit 3.

This course is a continuation of the functional study of law begun in the preceding courses. As in the previous courses in law, the study is largely inductive and based upon case material. The work begins with a consideration of the law relating to risk-bearing as a function in business and includes a study of the devices which the law furnishes for the shifting and limiting of risks. The legal aspects of the business man's relation to labor and competitive labor practices, including the common law contract of employment are also considered.

**333 CORPORATION ACCOUNTING.** Class 2 hours, laboratory 3 hours. Credit 3.

This is the first quarter of the second year's work in accounting. The course is designed to give the prospective business manager a fairly definite idea of the type of service which can and should be provided by accounting

as a measuring aid of business control. It is planned to train young men and women for service in accounting departments of corporations, and other institutions, and for general accountancy work.

Prerequisite: Commerce 220.

**334 CORPORATION ACCOUNTING.** Class 2 hours, laboratory 3 hours. Credit 3.

This is a continuation of the first quarter's work in corporation accounting, and includes accounting work on intangible assets, such as patents, franchises and good-will, liabilities on the balance sheet, current and contingent liabilities, bonds and mortgages, capital stock and its valuation, profits, surplus, reserves, dividends, the sinking fund, and profit and loss summaries.

**335 CORPORATION ACCOUNTING.** Class 2 hours, laboratory 3 hours. Credit 3.

In this quarter, the work in corporation accounting is completed. Specifically, the work covers liquidation of a corporation, combinations and consolidations, branch house accounting, suspense accounts, adjustments of fire losses, statistics in business, journal vouchers, the consolidated balance sheet, profit and loss summaries, accounts and reports of receivers and trustees; and general review problems in the field of corporation accounting.

**336 CREDITS AND COLLECTIONS.** Class 3 hours. Credit 3.

This course is a study of modern methods of extending credit and making collections. Since a large percent of business transactions are made on a partial credit basis it is important that the economic and legal questions involved be thoroughly understood. The actual procedure in making collections is studied. Some attention is given to credit rating and collection agencies.

Not given in 1922-23.

**337 BUSINESS ORGANIZATION.** Class 3 hours. Credit 3.

The basis of this course is a thorough study of the principles of the corporate form of business. A detailed study is made of the usual procedure followed in organizing a corporation. The methods of raising funds through the sale of the various forms of common and preferred stock are considered. Attention is also given to the general problems of amortization and capitalization. The work is then continued with an investigation of the methods of distributing securities. Attention also is given to the modern trust movement.

**440 COST ACCOUNTING.** Class 2 hours, laboratory 3 hours. Credit 3.

Cost accounting is distinctly one of the measuring aids for factory control. The industrial manager should be able to use cost analysis freely to increase the efficiency of his plant. The value of his statistical information will depend to a large extent on the accuracy of the cost records of the business. In this course, the essential features of cost accounting and analysis are covered as fully as time permits.

Prerequisite: Commerce 220.

**441 AUDITING.** Class 2 hours, laboratory 3 hours. Credit 3.

The work of the professional accountant, or auditor, consists largely in making examinations of financial records of business concerns, and in the construction of systems of accounts. In this course the duties of the auditor are studied and special attention is given to the methods of conducting an audit. Auditing problems are solved in the laboratory. The aim of the course is to prepare students for auditing and accounting work, and to aid them in preparing for the C. P. A. and A. I. A. examinations.

Prerequisite: Commerce 440.

**442 CERTIFIED PUBLIC ACCOUNTING PROBLEMS.** Class 2 hours, laboratory 3 hours. Credit 3.

This course consists in solving problems used in certified public accountant examinations in the various states, and in the examinations conducted by the American Institute of Accountants. The aim is to provide training in solving highly technical accounting and business problems, as an aid to those preparing for the C. P. A. and A. I. A. examinations, as well as for those expecting to engage in higher accountancy work.

Prerequisite: Commerce 440.

**443 BUSINESS LAW.** Class 3 hours. Credit 3.

This course is offered as a general survey of the field of business law and is given especially for students in the School of Engineering. Better to prepare the Engineer to understand the system of law under which he lives a brief general survey of the historical development and spread of the common law is made. The class then will be taken through a detailed study of the law of contracts, with special reference to construction contracts. Some attention also will be given to negotiable instruments, guaranty and suretyship, agency, partnerships and corporations. The principal rules of business law are drawn from the study of cases and other source material.

Not open to students who have completed Commerce 330.

**444 REAL PROPERTY LAW.** Class 3 hours. Credit 3.

An attempt is made in this course to cover in a general way the field of the law of real property. The work is based on a study of leading cases, which illustrate the important principles of the law. The legal rules governing property in land are exceedingly complicated and should be attempted only by students who have had at least one college course in business law.

Prerequisite: Commerce 330.

Not offered in 1922-23.

**445 BANKING PRACTICE.** Class 3 hours. Credit 3.

This is a study of actual banking practice in the United States. Attention is given to the actual routine work in a bank, as well as to the larger problems of management.

Not given in 1922-23.

**446 Personal Administration.** Class 3 hours. Credit 3.

The purpose of this course is to set forth the principles and the best prevailing practice in the administration of human relations in industry. The field of activity covered includes employment methods, health and safety, training of employees, job analysis, labor turnover, wage determination, co-ordination of departments, collective bargaining, industrial councils and scientific management.

**MARKETING GROUP****330 PRINCIPLES OF MARKETING.** Class 3 hours. Credit 3.

This is a study of the problems and methods connected with the distribution of both raw materials and manufactured products. An analysis of commodities, markets and marketing functions is made. The problems of the middleman, transportation, storage, risks, standardization, finance, and prices are considered and some attention is given to trade organization.

**331 ADVERTISING AND SALESMANSHIP.** Class 3 hours. Credit 3.

The purpose of this study is to discover the psychological principles involved in the problems of appeal and response in advertising and selling. Selling talks, sales letters, and advertising copy are analyzed, and practice in their preparation, presentation and application is given. Lessons are drawn from sales departments of large corporations and other business associations.

**440 FOREIGN TRADE.** Class 3 hours. Credit 3.

This is a general survey of the commercial policies of the United States and their bearing on international relations. Attention is given to tariff controversies, American industrial expansion, anti-dumping legislation, trade discrimination between nations, the promotion of export trade, the development of South American and Oriental markets, the technique of foreign commerce and the effect of the world war on international commercial development.

**SECRETARIAL TRAINING GROUP****106 BEGINNERS SHORTHAND.** Class 5 hours. Credit 3.

This course covers the fundamental principles of Gregg shorthand found in the first twelve lessons of the manual with special emphasis placed upon phonetics. A test is given on each lesson. Dictation of simple business letters is given during the latter part of this course.

**107 INTERMEDIATE SHORTHAND.** Class 5 hours. Credit 3.

The manual is completed and "The Principal Series of Gregg Speed Studies" is started, with "repetition practice" on classified letters. Supplementary practice is given on material drawn from actual business. The student should be able to take dictation at the rate of sixty to eighty words a minute. The transcription of shorthand notes is a feature of the work.

**108 BEGINNERS DICTATION.** Class 5 hours. Credit 3.

In this course the Gregg Speed Studies is completed. Daily supplementary dictation is given on classified letters, magazine articles and newspaper clippings. The student should be able to take dictation at the rate of 80 to 100 words a minute.

**110 TYPEWRITING.** Laboratory 6 hours. Credit 2.

Key board drills; drills for accuracy; copying from straight material. Touch system. Blind key board.

**111 TYPEWRITING.** Laboratory 6 hours. Credit 2.

Letter forms; rough drafts; specification; tabulating; a speed of thirty words a minute net with not more than five errors for ten minutes writing on new material.

**112 TYPEWRITING.** Laboratory 6 hours. Credit 2.

Billing; legal forms; mimeographing; a speed of forty words a minute net with not more than five errors for ten minutes writing from new material.

**218 ADVANCED DICTATION.** Class 5 hours. Credit 3.

Dictation is given on more difficult and technical material and all work must be transcribed on the typewriter. Students are required to prepare official correspondence for the members of the faculty of the School of Commerce and Marketing. The use of the dictaphone, the mimeograph and other office appliances and the routine duties of the office in general are emphasized. The student should be able to take dictation at a speed of 100 to 120 words a minute.

**219 BUSINESS CORRESPONDENCE.** Class 3 hours. Credit 3.

In this course thorough practice is given in many branches of correspondence, including letters dealing with credit, collections, purchases, and sales. Prerequisite: S.T. 108.

**220 OFFICE TRAINING.** Class 3 hours. Credit 3.

The purpose of this course is to give instruction in business ethics, the mechanics of letter writing, the uses of business forms and papers, filing,

shipping, duplicating, and other work ordinarily required of the office clerk. Advanced shorthand and typewriting practice is a feature of this work.

Prerequisite: S. T. 107.

221 SHORTHAND. Class 3 hours. Credit 3.

This is a beginner's course in Gregg shorthand designed especially for those who are preparing to teach.

222 SHORTHAND. Class 3 hours. Credit 3.

This course is a continuation of S. T. 221.

223 SHORTHAND. Class 3 hours. Credit 3.

This course is a continuation of S. T. 222.

**THE SCHOOL OF VETERINARY MEDICINE**



## FACULTY

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JAMES BURNETTE ESKRIDGE, A. M., Ph. D., *President of the College*

LOWERY LAYMON LEWIS, B. S. A., M. S., D. V. M.; *Dean of the Faculty, Dean of the School of Veterinary Medicine, Professor of Veterinary Medicine.*

CLARENCE HAMILTON McELROY, B. S., D. V. M.; *Associate Professor of Veterinary Medicine.*

HARRY WILLIAM ORR, D. V. M.; *Assistant Professor of Veterinary Medicine.*

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EDWARD CLARK GALLAGHER, B. S.; *Director of Athletics, Professor of Physical Education.*

ARTHUR CHRISTOPHER BAER, B. S. A.; *Professor of Dairy Husbandry.*

\*HILTON IRA JONES, A. B., A. M., Ph. D.; *Professor of Chemistry.*

WARREN LALE BLIZZARD, B. S.; *Professor of Animal Husbandry.*

DAVID TERRY MARTIN, A. B.; *Professor of Public Speaking.*

JOSEPH BENJAMIN PATE, B. A.; Major, Inf., U. S. Army; *Commandant, Professor of Military Science and Tactics.*

ROBERT OSCAR WHITENTON, A. B., M. S.; *Associate Professor of Zoology.*

\*On leave of absence.

## THE SCHOOL OF VETERINARY MEDICINE

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The growing importance of the livestock industry of the State has made a course in Veterinary Medicine a necessity. The work is outlined so as to provide a thorough and well-balanced course of instruction leading to the degree of Doctor of Veterinary Medicine.

The entrance requirements to this course of study include the presentation of 15 units of high school work. (See entrance credits in first of catalog for detailed statement.)

Candidates for the degree of Doctor of Veterinary Medicine must have attained the age of 21 years, and satisfactorily completed all of the courses as outlined.

There are many opportunities in professional and scientific work for young men of thorough training in veterinary medicine. In order to meet the demands that are being made on their entering the field of private practice or positions requiring technical knowledge, the veterinarian must have a good general education in addition to the specialized work in veterinary medicine.

Some of the more prominent fields of work open to veterinarians are as follows:

*Private Practice.*—There are many good fields of work, not only in Oklahoma, but in other States. There is a growing interest in the South in the livestock business, and as money invested in livestock increases, so will the demand for competent veterinarians.

*Civil Practice.*—Much important work in the United States Department of Agriculture is open only to men who are graduates from veterinary colleges.

*State and City Work.*—The positions of State and Assistant State Veterinarians and municipal food inspectors are open as a rule only to qualified veterinarians.

The army service also offers a field of work that is becoming attractive to qualified men.

The last two years' work in veterinary medicine will not be given in 1922-23.

## COURSES IN THE SCHOOL OF VETERINARY MEDICINE

The following outline of study represents the required work in the School of Veterinary Medicine. The courses are numbered, beginning with 100 for the freshman year, 200 for the sophomore year, 300 for the junior year, and 400 for the senior year. The laboratory work is in parenthesis; three hours of this work is equivalent to one theory hour, or one credit. To graduate, a student must complete the following courses as outlined.

## FRESHMAN YEAR

## FALL QUARTER

	Hrs.	Cr.
V. M. 111, Anatomy .....	3 (3)	4
V. M. 114, Histology .....	2 (6)	4
Chem. 106, Inorganic .....	3 (3)	4
Zool. 213, General .....	3 (6)	5
Mil. Sci. 101 .....	(3)	1
Phy. Edu. 131 .....	(3)	1

## WINTER QUARTER

	Hrs.	Cr.
V. M. 112, Anat. ....	3 (6)	5
V. M. 115, Hist. ....	3 (6)	5
Chem. 107, Inorganic .....	3 (3)	4
Pub. Spk. 130, Essentials .....	3	3
Mil. Sci. 102 .....	(3)	1
Phy. Edu. 132 .....	(3)	1

## SPRING QUARTER

	Hrs.	Cr.
V. M. 113, Anat. ....	3 (6)	5
A. H. 206, Breeds .....	3 (4)	4 $\frac{1}{3}$
Chem. 108, Inorganic .....	3 (3)	4
Zool. 408, Embry. ....	3 (3)	4
Mil. Sci. 103 .....	(3)	1
Phy. Edu. 133 .....	(3)	1

## SOPHOMORE YEAR

## FALL QUARTER

	Hrs.	Cr.
V. M. 221, Anat. ....	3 (6)	5
V. M. 224, Pathology .....	3 (3)	4
V. M. 226, Physiology .....	3 (3)	4
V. M. 229, Materia Medica .....	5	5
Mil. Sci. 201 .....	(3)	1

## WINTER QUARTER

	Hrs.	Cr.
V. M. 222, Anat. ....	3 (6)	5
V. M. 225, Path. ....	3 (6)	5
V. M. 227, Phys. ....	3 (3)	4
Bact. 208 .....	2 (6)	4
Mil. Sci. 202 .....	(3)	1

## SPRING QUARTER

	Hrs.	Cr.
V. M. 223, Anat. ....	3 (6)	5
V. M. 228, Phys. ....	3 (3)	4
V. M. 230, Pharmacy .....	3 (3)	4
Bact. 209 .....	2 (6)	4
Mil. Sci. 203 .....	(3)	1 $\frac{2}{3}$

## JUNIOR YEAR

## FALL QUARTER

	Hrs.	Cr.
V. M. 331, Theo. and Prac. ....	4 (3)	5
V. M. 334, Surgery .....	3 (3)	4
V. M. 337, Pathology (sp) .....	2 (3)	3
V. M. 340, Clinic .....	(9)	3
V. M. 343, Therapeutics .....	4	4

## WINTER QUARTER

	Hrs.	Cr.
V. M. 332, T. and P. ....	4 (3)	5
V. M. 335, Surg. ....	3 (3)	4
V. M. 338, Path. ....	2 (3)	3
V. M. 341, Clinic .....	(9)	3
V. M. 345, Therap. ....	4	4

## SPRING QUARTER

	Hrs.	Cr.
V. M. 333, T. and P. ....	4 (3)	5
V. M. 336, Surg. ....	3 (3)	4
V. M. 339, Par. ....	3 (3)	4
V. M. 342, Clinic .....	(9)	3
A. H. 311, Feeding .....	4	4

## SENIOR YEAR

## FALL QUARTER

	Hrs.	Cr.
V. M. 434, Theo. and Prac. ....	4	4
V. M. 437, Surg. ....	4 (3)	5
V. M. 439, Obstetrics .....	4	4
V. M. 443, Clinic .....	(12)	4

## WINTER QUARTER

	Hrs.	Cr.
V. M. 435, T. and P. ....	4	4
V. M. 438, Surg. ....	4 (3)	5
V. M. 441, Dairy Insp. ....	3	3
V. M. 442, Meat Insp. ....	3	3
V. M. 444, Clinic .....	(12)	4

## SPRING QUARTER

	Hrs.	Cr.
V. M. 436, T. and P. ....	4	4
Bact. 316, Immun. ....	4 (6)	6
V. M. 440, Law .....	3	3
V. M. 445, Clinic .....	(12)	4

## SUBJECTS

## 111-112-113 GROSS ANATOMY, OSTEOLOGY, ARTHROLOGY, MYOLOGY, SPLANCHNOLOGY.

Systemic anatomy of the bones, joints, muscles, respiratory, digestive and uro-genital systems. Dissection of the horse.

111 Fall Quarter. Class 3 hours, laboratory 3 hours. Credit 4.

112 Winter Quarter. Class 3 hours, laboratory 6 hours. Credit 5.

113 Spring Quarter. Class 3 hours, laboratory 6 hours. Credit 5.

## 114-115 MICROSCOPIC ANATOMY (Histology).

A study of the cells, tissues and arrangement of them in the organs of the body with the aid of the microscope. Students will be required to make a number of sections of the various tissues.

114 Fall Quarter. Class 2 hours, laboratory 6 hours. Credit 4.

115 Winter Quarter. Class 3 hours, laboratory 6 hours. Credit 5.

## 221-222-223 GROSS ANATOMY, MYOLOGY, ANGIOLOGY, NEUROLOGY, COMPARATIVE ANATOMY.

Systemic anatomy of the vascular and nervous systems with a review of the muscles and fascial compartments. Dissection of the horse, ox, sheep and pig.

Fall, Winter, Spring Quarters, respectively. Class 3 hours, laboratory 6 hours. Credit 5 each quarter.

Prerequisite: V. M. 111, 112, 113.

## 224-225 GENERAL PATHOLOGY.

The causes of diseases and the effects of disease processes upon the body tissues and fluids. In the laboratory diseased tissues are studied and drawn with the aid of the microscope and projectoscope.

224 Fall Quarter. Class 3 hours, laboratory 3 hours. Credit 4.

225 Winter Quarter. Class 3 hours, laboratory 6 hours. Credit 5.

Prerequisite: V. M. 111, 112, 113, 114, 115.

## 226-227-228 COMPARATIVE PHYSIOLOGY.

The physiology of the circulatory, respiratory, digestive, muscular and nervous systems; ductless glands and nutrition.

Fall, Winter, Spring Quarters, respectively. Class 3 hours, laboratory 3 hours. Credit 4 each quarter.

Prerequisite: V. M. 111, 112, 113, 114, 115.

## 229 MATERIA MEDICA.

This subject deals with the origin, composition, classification, physical and chemical properties and tests for purity of medical materials.

Fall Quarter. Class 5 hours. Credit 5.

Prerequisite: Chem. 106, 107, 108.

## 230 PHARMACY.

Pharmaceutical principles and methods, official drugs, chemicals and preparations, incompatibility and prescription writing.

Spring Quarter. Class 3 hours, laboratory 3 hours. Credit 4.

Prerequisite: V. M. 229.

## 331-332-333 THEORY AND PRACTICE.

A study of the methods employed in the diagnosis of animal diseases and a consideration of the non-infectious diseases.

Fall, Winter, Spring Quarters, respectively. Class 4 hours, laboratory 3 hours. Credit 5 each quarter.

Prerequisite: V. M. 221, 222, 223, 224, 225, 226, 227, 228, 229, 230.

**334-335-336 GENERAL SURGERY.**

A study of the principles of surgery and surgical technique. The use of different anaesthetics and methods of restraint are demonstrated.

Fall, Winter, Spring Quarters, respectively. Class 3 hours, laboratory 3 hours. Credit 4 each quarter.

Prerequisite: All courses in first two years in Vet. Med.

**337-338 SPECIAL PATHOLOGY.**

A study of disease processes in the different organs of the body and specific diseases.

Fall, Winter Quarters, respectively. Class 2 hours, laboratory 3 hours. Credit 3 each quarter.

Prerequisite: V. M. 224, 225.

**339 PARASITOLOGY.**

A study of the internal and external parasites of the domestic animals.

Spring Quarter. Class 3 hours, laboratory 3 hours. Credit 4.

Prerequisite: Zool. 213.

**340-341-342 CLINICS.**

Fall, Winter, Spring Quarters, respectively. Laboratory 9 hours. Credit 3.

Prerequisite: All courses in first two years of Vet. Med.

**343-344 THERAPEUTICS.**

A study of the use of all agencies that are of value in the treatment of diseases and the relief of pain, the modes of actions of drugs, their indications and contraindications, dosages and methods of administration.

Fall, Winter Quarters, respectively. Class 4 hours. Credit 4 each Quarter.

Prerequisite: V. M. 224, 225, 226, 227, 228, 229, 230.

**434-435-436 THEORY AND PRACTICE.**

Infectious diseases; their diagnosis, treatment and methods of control.

Fall, Winter, Spring Quarters, respectively. Class 4 hours. Credit 4.

Prerequisite: First three years of Vet. Med.

**437-438 SURGERY.**

A study of the various surgical diseases of the body including dentistry. The students are required to perform a large number of operations upon living animals.

Fall, Winter Quarters, respectively. Class 4 hours, laboratory 3 hours. Credit 5.

**439 OBSTETRICS.**

The work is devoted largely to a consideration of the different abnormal conditions arising incident to pregnancy and parturition. The subject of sterility is given special attention.

Fall Quarter. Class 4 hours. Credit 4.

Prerequisite: All courses in first three years of Vet. Med.

**440 VETERINARY LAW.**

A consideration of some of the fundamentals of business and other legal and ethical obligations of the veterinarian.

Spring Quarter. Class 3 hours. Credit 3.

**441 DAIRY INSPECTION.**

The inspection of milk and milk products. The laboratory work includes the more important physical, chemical and microscopic tests.

Winter Quarter. Class 2 hours, laboratory 3 hours. Credit 3.

Prerequisite: Chem. 106, 107, 108. Bact. 316.

## 442 MEAT INSPECTION.

The inspection of meat and meat products.

Winter Quarter. Class 3 hours. Credit 3.

Prerequisite: All courses in first three years of Vet. Med.

## 443-444-445 CLINICS.

In the clinic students have the opportunity to put into practice much of their previous training. Cases are treated by the students under the direction of instructors.

Fall, Winter, Spring Quarters, respectively. Laboratory 12 hours. Credit 4 each quarter.

Prerequisite: All courses in first three years of Vet. Med.

## THE SUMMER SCHOOL



# FACULTY

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- JAMES BURNETTE ESKRIDGE, A. M., Ph. D.; *President of the College.*
- HERBERT PATTERSON, A. B., A. M., Ph. D.; *Dean of the School of Education, Director of the Summer School.*
- LOWERY LAYMON LEWIS, B. S. A., M. S., D. V. M.; *Dean of the Faculty, Dean of the School of Science and Literature, Dean of the School of Veterinary Medicine, Professor of Veterinary Medicine, Zoology and Bacteriology.*
- MALCOLM ALFRED BEESON, B. S., D. Sc.; *Dean of the School of Agriculture.*
- HENRY FULLER HOLTZCLAW, A. B., Ph. D.; *Dean of the School of Commerce and Marketing, Professor of Economics.*
- RICHARD GAINES TYLER, C. E., B. S. in C. E.; *Dean of the School of Engineering, Professor of Civil Engineering.*
- ELLA NORA MILLER, B. S., M. S.; *Dean of the School of Home Economics, Professor of Domestic Science.*
- CARL GUNDERSEN, A. B., A. M., Ph. D.; *Professor of Mathematics.*
- CHARLES EMERSON SANBORN, A. B., A. M.; *Professor of Entomology.*
- CHARLES OSCAR CHAMBERS, A. B., A. M., Ph. D.; *Professor of Botany.*
- EDWARD CLARK GALLAGHER, B. S.; *Director of Athletics, Professor of Physical Education.*
- BOHUMIL MAKOVSKY, *Director of Music, Professor of Brass and Reed Instruments.*
- NORA AMARYLLIS TALBOT, B. S., A. M.; *Professor of Domestic Art.*
- ARTHUR CHRISTOPHER BAER, B. S. A.; *Professor of Dairying.*
- DEWITT TALMADGE HUNT, B. S.; *Superintendent of Shops.*
- HARRY EMBLETON, B. S.; *Professor of Poultry Husbandry.*
- \*HILTON IRA JONES, A. B., A. M., Ph. D.; *Professor of Chemistry.*
- LESLIE EUGENE HAZEN, B. S.; *Professor of Rural Engineering.*
- WARREN LALE BLIZZARD, B. S.; *Professor of Animal Husbandry.*
- OLIN MITCHELL CLARK, B. S.; *Professor of Agricultural Education.*
- CHARLES LEONARD KEZER, B. S., A. B.; *Principal of Secondary School, Professor of Secondary Education.*
- ALBERT SAMUEL HIATT, A. B.; *Professor of History.*
- JOHN HOFER CLOUD, A. B., A. M., Ph. D.; *Professor of Physics.*
- ALMON AI ARNOLD, A. B., A. M.; *Professor of Modern Languages.*
- DAVID TERRY MARTIN, A. B.; *Professor of Public Speaking.*
- WILLIAM BENJAMIN PARKS, A. M., S. M., Ph. D.; *Professor of Chemistry.*
- WILLIAM PTOLEMY POWELL, B. A., M. A.; *Professor of English.*
- WILLIAM JASPER MILLER, E. E., S. M. E. E.; *Professor of Electrical Engineering.*
- AVERY LUVERE CARLSON, B. A., M. A., J. D.; *Professor of Business Administration.*
- LEROY ALONZO WILSON, M. E., M. M. E.; *Professor of Mechanical Engineering.*
- PRESTON MURDOCH GEREN, B. S. in A. E.; *Professor of Architecture and Architectural Engineering.*
- RUTH DuBOIS, Diploma, A. B.; *Professor of Physical Education for Women.*
- ROBERT E HARTSOCK, A. B., S. B.; *Professor of Mathematics.*
- SOLOMON LUTHER REED, A. B., A. M., Ph. D.; *Professor of Education.*
- JUDSON ALLEN TOLMAN, A. B., A. M., Ph. D.; *Professor of Ancient Languages.*
- ROBERT OSCAR WHITENTON, A. B., M. S.; *Associate Professor of Zoology.*
- CARL POLLARD THOMPSON, B. S., M. S.; *Associate Professor of Animal Husbandry.*
- CLARENCE HAMILTON McELROY, B. S., D. V. M.; *Associate Professor of Bacteriology and Veterinary Medicine.*
- ROBERT DuBOIS, A. B., M. S.; *Associate Professor of Chemistry.*
- GRACE ALICE MOUNTCASTLE, Ph. B.; *Associate Professor of English.*
- AGNES BERRIGAN, B. A., M. A.; *Associate Professor of English.*
- ADRIAN DAANE, Ph. B., M. S.; *Associate Professor of Agronomy.*
- FRED McCARREL, B. S., M. S.; *Associate Professor of Education.*

\*On leave of absence.

- WILLARD RUDE, Diploma; *Associate Professor of Secretarial Training.*  
 GLEN NEWTON BRIGGS, B. S., M. S.; *Associate Professor of Agronomy.*  
 ETHEL DAVIS, B. S.; *Associate Professor of Domestic Art.*  
 ARTHUR DEVRIES BURKE, B. S., M. S.; *Associate Professor of Dairying.*  
 JAMES HENRY CALDWELL, *Assistant Professor of History.*  
 EWALD W. SCHUHMANN, A. B., A. M.; *Assistant Professor of Physics.*  
 EDWARD McCARREL, A. B.; *Assistant Professor of Mathematics.*  
 WILLIAM CAMPBELL PAYNE, B. S.; *Assistant Professor of Mathematics, Secondary School.*  
 HARRY WILLIAM ORR, D. V. M.; *Assistant Professor of Veterinary Medicine.*  
 LLOYD KEITH COVELLE, Certificate; *Assistant Professor in Shops.*  
 EDWIN DORENCE SODERSTROM, Diploma; *Assistant Professor in Shop Practice.*  
 JOSEPH JULIAN PATTERSON, B. S. in Arch.; *Assistant Professor of Architecture and Architectural Engineering.*  
 ALBERT EDWARD DARLOW, B. S.; *Assistant Professor of Animal Husbandry.*  
 ROBERT STRATTON, B. A., M. A.; *Assistant Professor of Botany and Plant Pathology.*  
 ELLIS C. BAKER, B. S.; *Assistant Professor of Mechanical Engineering.*  
 EARL DAVID MARKWELL, B. S.; *Assistant Professor of Horticulture.*  
 HENRY FRED MURPHY, B. S.; *Assistant Professor of Agronomy.*  
 CHARLES LESLIE NICKOLLS, B. S., M. S.; *Assistant Professor of Chemistry.*  
 THOMAS MALCOLM AYCOCK, B. S.; *Assistant Professor of Physical Education.*  
 EMELIA MARIE SKARRA, Diploma; *Assistant Professor of Physical Education for Women.*  
 JAMES HAROLD MURDOUGH, S. B.; *Assistant Professor of Civil Engineering.*  
 WILLIAM AMBROSE RADSPINNER, B. S., M. S.; *Assistant Professor of Horticulture.*  
 MILLARD GEORGE HARNDEN, B. S.; *Assistant Professor of Agricultural Education.*  
 MARY MARIE BAIRD, B. S., M. A.; *Assistant Professor of Domestic Science.*  
 WILLIAM EDGAR JACKSON, B. S., M. S.; *Assistant Professor of Entomology.*  
 BERTIE VORHIES, Ph. B.; *Assistant Professor of Domestic Science.*  
 JOSEPH DEWEY STAFFORD, B. S.; *Assistant Professor of Rural Economics and Sociology.*  
 JANE PORTER SLOSS, Graduate; *Instructor in Piano.*  
 FRANK RUSSELL BRADLEY, *Instructor in Shops.*  
 DAISY DELL McCOOL, Diploma; *Instructor in Art.*  
 PHILIP ARMOUR WILBER, B. S.; *Instructor in Architecture.*  
 MARY ELEANOR LOCKWOOD, A. B.; *Instructor in Modern Languages.*  
 ALICE TRAVER, B. S.; *Instructor in Secondary School.*  
 FRED J. BEARD, B. S.; *Instructor in Vocational Animal Husbandry.*  
 FRANK HLADKY, Jr., Graduate; *Instructor in Violin.*  
 LEONA KATHERINE SIEGLINGER, B. S.; *Instructor in Physics.*  
 ELIZABETH KATHERINE MOREHARDT, Diploma; *Instructor in Voice.*  
 ANNIE GARNER THORNTON, *Instructor in Secondary School.*  
 MABEL DAVIS HOLT, B. S.; *Instructor in Secondary School.*  
 BENJAMIN CICERO DYESS, Diploma; *Instructor in Mathematics, Secondary School.*  
 RUFUS QUITMAN GOODWIN, B. S.; *Instructor in Secondary School.*  
 CHARLES VICTOR BULLEN, B. S. in E. E.; *Instructor in Electrical Engineering.*  
 ISABELLE MILLIGAN STORY, B. S.; *Instructor in Domestic Art.*  
 \*CHARLES MEEKS ANDERSON, B. A., M. A.; *Instructor in Economics.*  
 MARGARET STEVENS STERN, B. S.; *Instructor in Domestic Science.*  
 JOHN WILSON BRIGHAM, *Instructor in Voice.*  
 HARRIET RUBY ENSWORTH, Ph. B.; *Instructor in English.*  
 MABEL CALDWELL, B. S.; *Instructor in Secondary School.*  
 MABEL POLK, *Instructor in Art.*  
 DANIEL L. HUFFMAN, B. M.; *Instructor in Piano.*  
 THAMAZIN HUTCHINS, B. M.; *Instructor in Piano.*

## SPECIALS

- JOHN FREDERICK MAULBETSCH, B. S.; *Coach of Football, Basketball and Baseball.*  
 ROY WASHINGTON KENNY, B. S.; *Assistant Coach of Athletics.*  
 CHRISTIAN JENSEN, *Assistant in Horticulture and Forestry and Landscape Gardener.*  
 CHARLES W. BRILES, B. L.; *State Director of Vocational Education.*  
 JOHN WILLIAM BRIDGES, B. S., M. S.; *State Supervisor of Agricultural Education.*  
 MAUDE RICHMAN, M. S.; *State Supervisor of Home Economics Education.*

\*On leave of absence.

FRANK CUSHMAN, *Chief of Trade and Industrial Division, Federal Board of Vocational Education.*

SPECIAL SUMMER SCHOOL INSTRUCTORS

HERBERT SPENCER JONES, Ph. B.; *Special Instructor in Education.*  
 MARY LILLIA SCHENK, A. B., A. M.; *Special Instructor in Education.*  
 WILLIAM FRANKLIN SHULTZ, A. B.; *Special Instructor in Mathematics.*  
 ROSCOE CONCKLIN EVANS, B. A.; *Special Instructor in English.*  
 BRICE EVANS HAMMERS, A. B.; *Special Instructor in History and Geography.*  
 LAURA GHERING, A. B.; *Special Instructor in English.*  
 JOSEPH ROBERT HOLMES, A. B.; *Special Instructor in Education.*  
 VIRGIA McCARREL, B. S.; *Special Instructor in Education.*  
 HUGH C. FAUST, B. A.; *Special Instructor in Education.*  
 HENRY GUSTAV BORCHARDT, A. B.; *Special Instructor in Chemistry.*  
 L. CHESTER LOWRY, *Special Instructor in Mathematics.*  
 CIARENCE LELAND WILLIAMS, A. B.; *Special Instructor in English.*  
 RICHARD MILES McCOOL, B. S.; *Special Instructor in Agriculture.*

SPECIAL SUMMER SCHOOL LECTURERS

ELLSWORTH FARIS, Ph. D.; *Professor of Sociology, University of Chicago.*  
 D. E. PHILLIPS, Ph. D.; *Professor of Psychology, University of Denver.*  
 RAY BURNS, B. S.; *Carnegie, Oklahoma.*  
 CHARLES E. BENSON, Ph. D.; *Acting Dean of School of Education, University of Oklahoma.*  
 PHIL C. BAIRD, Ph. D.; *Minister First Presbyterian Church, Oklahoma City.*  
 I. N. McCASH, Ph. D.; *President, Philips University.*  
 KARY C. DAVIS, Ph. D.; *Professor of Agricultural Education, Peabody College for Teachers, Nashville, Tennessee.*  
 CHARLES W. RICHARDS, A. B.; *Superintendent of Schools, Ardmore.*  
 E. A. MILLER, *U. S. Department of Agriculture, Washington, D. C.*  
 EDWARD HOWARD GRIGGS, A. M., L. H. D.; *Lecturer, New York City.*  
 A. P. BOURLAND, Ph. D.; *Secretary Southern Educational Society, Washington, D. C.*

# THE SUMMER SCHOOL

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## CALENDAR FOR 1922

Registration, Wednesday, May 31, 8:00 a. m. to 5:00 p. m.  
Classes Begin, Thursday, June 1, 7:00 a. m.  
Convocation, Friday, June 2, 9:00 a. m.  
National Holiday, Tuesday, July 4.  
Final Examinations, Thursday and Friday, July 27 and 28.  
Summer School Closes, Saturday, July 29.

## PURPOSE

The Summer School is intended to meet the needs of the following classes of people:

*Teachers* who are seeking to improve in their work and are able to attend college during the summer months only. There are unusual opportunities offered by the Oklahoma A. and M. College for those preparing to teach agriculture, home economics, and manual training, as well as the academic subjects of the high schools and grades. College credits toward graduation and the bachelor's degree may be secured by teachers at the same time that they are increasing their ability as teachers.

*Prospective Teachers* and teachers who wish to secure credits to be applied toward the various teachers' certificates granted in the State of Oklahoma. All studies are offered which are required for teachers' first, second and third grade certificates. When credit is earned in any of these subjects, county superintendents will accept credits in place of an examination in such subjects.

*Students* who desire to shorten their college course. A wide variety of regular college credit courses is given during the summer.

Courses are offered in all of the schools of the College: School of Agriculture, School of Commerce and Marketing, School of Education, School of Engineering, School of Home Economics, School of Science and Literature, the Secondary School, and the Departments of Music and Physical Education.

## HISTORY

For fourteen years the Summer School has been an important

part of the service the Oklahoma A. and M. College has been rendering to the State of Oklahoma. The first Summer School was held in 1908 with an enrollment of 191. Since then the enrollment has steadily increased, as indicated by the following figures:

Enrollment in Summer School: 1908, 191; 1909, 222; 1910, 266; 1911, 346; 1912, 307; 1913, 322; 1914, 402; 1915, 492; 1916, 520; 1917, 395; 1918, 421; 1919, 576; 1920, 660; 1921, 841.

#### *EQUIPMENT*

The equipment of the Oklahoma Agricultural and Mechanical College is unexcelled in the State of Oklahoma. There are twelve brick and stone buildings, and ten other buildings, a campus of eighty acres, and a farm of 1,000 acres. The total value of the plant is \$2,004,733. All laboratories are well supplied with modern equipment. There is an excellent library.

#### *FACULTY*

The regular College professors and instructors furnish the instruction during the Summer School. This insures excellent teaching. In addition there will be a number of prominent school men from the State to supplement the regular teaching staff.

#### *TERMS OF ADMISSION*

There are no entrance requirements for teachers and those who are preparing to teach.

Those taking work toward graduation from college will be governed by the rules of the College relating to admission and degrees, as stated in the general catalog.

#### *CREDITS*

In order to complete regular quarter subjects during the nine weeks of Summer School, the number of class hours in each subject is increased. Students are expected to select a program of studies similar in amount to that of the regular College year. The number of hours taken may vary from 12 to 20. The maximum credit allowed for summer work is 15 quarter credits in College work and  $1\frac{1}{2}$  units in Secondary School work. No student may receive more than 1 unit in Secondary School work except with the permission of the Principal of the Secondary School.

#### *TEACHERS' EXAMINATIONS*

The regular State examinations for third grade, or one-year certificates for teachers, are given at the College. These examina-

tions are supervised by the College instructors, but all fees and papers are forwarded to county superintendents. Teachers should consult their county superintendents in regard to their examination papers and grades. The certificates secured by taking these examinations at the Oklahoma A. and M. College are accepted in any county in the State of Oklahoma.

#### *TEACHERS' CERTIFICATES*

All the subjects needed for state, county, and special teachers' certificates will be offered during the summer. The Oklahoma A. and M. College is accredited with the State Department of Education to prepare teachers of all kinds.

#### *TEACHERS' EMPLOYMENT BUREAU*

The free service of the Teachers' Employment Bureau are available for teachers, prospective teachers, superintendents and school boards. Blanks for this purpose are found in the Secretary's office, Morrill Hall.

#### *SWIMMING POOL*

The excellent new Gymnasium is the finest in Oklahoma. The swimming pool is available for those who enjoy this form of exercise. There are special hours reserved for women, and other hours for men.

#### *CHAUTAUQUA*

The Redpath-Horner Chautauqua Company will present a series of lectures and entertainments in Stillwater during one week of the summer session. The program will be given in the afternoons and evenings. This makes it possible for Summer School students to attend without interfering with their regular classes. A season ticket for the entire series of programs will be sold at a nominal price.

#### *MORAL AND RELIGIOUS INFLUENCES*

There are strong Y. M. C. A. and Y. W. C. A. organizations in the College. Also the churches of the city cooperate with the administration in furnishing a sane and wholesome religious and moral atmosphere for the students.

Stillwater has none of the temptations of the large city, and it is easy for students to develop strong characters while receiving their intellectual training.

*GENERAL ASSEMBLY AND SPECIAL LECTURES*

A general assembly will be held in the auditorium daily at 9 a. m. Many educators and lecturers of national reputation will appear on these programs. These include such men as Dr. Ellsworth Faris, Department of Sociology, University of Chicago; Dr. D. E. Phillips, Department of Psychology, University of Denver; Dr. Alexander Irvine, noted writer and lecturer, New York City; Dr. Kary C. Davis, Department of Agricultural Education, Peabody College for Teachers; E. A. Miller, United States Department of Agriculture, Washington, D. C.; and Edward Howard Griggs, noted lecturer and writer, New York. Students attending these lectures daily will receive credit for the course.

*ENTERTAINMENTS AND RECREATION*

During the summer there will be numerous entertainments, plays, concerts, and moving pictures in the College auditorium. The fine athletic equipment will be available for sports of all kinds. There are excellent opportunities for tennis, baseball, basketball, and swimming.

There are many attractive spots about Stillwater for those who enjoy hiking. Yost Lake, a summer resort, is nearby. Students will be able to find abundant recreation while taking their summer work.

*STORY TELLERS LEAGUE*

For the third consecutive year the Story Tellers League will be conducted at the Summer School. This has proved one of the most attractive features for recreation as well as for instruction. All are eligible for membership in the League. There are no fees.

*INSTITUTE FOR SMITH-HUGHES TEACHERS OF AGRICULTURE*

During the summer session there will be a special institute for the Smith-Hughes teachers of Agriculture in Oklahoma. Lecturers of note, in addition to the regular teaching force, will make a strong faculty for this institute. Two four-weeks courses will be given, one during the month of June and the other during July. The special lectures will be June 28th to July 3rd and will be for both of the courses.

Details concerning the work may be secured by writing directly to J. W. Bridges, State Supervisor of Agricultural Education, Capitol Building, Oklahoma City, Oklahoma.

## VOCATIONAL EDUCATION CONFERENCE

Four Weeks (June 12 to July 8)

The A. and M. College, in cooperation with the State Board for Vocational Education, has arranged a conference program for Trade and Industrial Education.

The courses are designed to meet the needs of (1) Foremen in industrial plants who are interested in a study of the problems of foremanship and the training of men for industrial occupations; (2) Teachers of Manual Training or Industrial Arts in high schools.

(1) The number in the industrial group will be limited to twenty. The objectives of the course are: (a) To train a group of men for more efficient discharge of their responsibilities in the fields of supervision, management, and instruction; (b) To develop the power of analysis by the conference method and the ability to direct foremanship training conferences in the plants to which the members of the group return; (c) To study the problems of training proper for industrial occupations as the program is being promoted by the Federal and State Boards for Vocational Education.

For this group the daily program will include: Foremanship training, three hours a day, Mr. Cushman; Instructor training, one hour a day, Mr. Hunt; The Relation of the School to Industrial Training, one hour a day, Mr. Briles and Dr. Patterson.

(2) The number in the group of manual training teachers will not be limited. As many sections as necessary will be provided. The objectives of the course are: (a) To determine what service may be rendered in a given community by the school in cooperation with industry in training men for the industrial occupations of the community; (b) To establish the relation of the department of manual training or industrial arts to the school program of industrial training; (c) To develop a program of foreman training and instructor training through which to relate the school program with industrial occupations; (d) To establish cooperative relations between foremen in industry and the school in the development of foremen training courses.

For this group the daily program will include: Foremanship training, two hours a day, Mr. Cushman; Instructor training, two hours a day, Mr. Hunt; Problems of Vocational Education as promoted by the Federal and State Boards, Mr. Briles and Dr. Patterson.

Mr. Frank Cushman has been connected with the Federal Board

for Vocational Education in the capacity of expert in Trade and Industrial Education since the organization of the board in 1917. He is recognized as an authority in methods of foreman training courses. Mr. Cushman will be at the College during the entire conference.

#### INSTITUTE FOR RURAL PASTORS

During the Summer School there will be held the third annual institute for rural pastors. This institute has proved an interesting and important phase of the summer session. It will last for two weeks.

This institute is under an interdenominational board. Special detailed announcement of the work is made in a special bulletin.

#### EXPENSES

*Matriculation Fee.*—All students registering for any work are required to pay \$2.50 as a matriculation fee. No refund is made.

*Rooms in Woman's Building or Crutchfield Hall.*—Attractive furnished rooms, with all modern conveniences, may be had in the Woman's Building or Crutchfield Hall at \$3 per month for each person. Application for these rooms should be made in advance to the Registrar. In order to secure a room, the application should be accompanied by the reservation fee, \$3. This covers the rent for the first month.

*Rooms With Private Families.*—Furnished rooms can be obtained in Stillwater at from \$5 to \$10 a month, when two occupy the room.

*The College Cafeteria.*—Board at the College Dining Hall is provided on the cafeteria plan at actual cost. Each student pays for what he eats. The average cost at present is about 20 cents a meal. The cafeteria plan provides opportunity for a larger menu from which to choose, and in general is more satisfactory than the plan of having a set table and no choice.

#### COURSES OFFERED IN 1922 SUMMER SCHOOL

The Summer School of 1922 offers more courses than ever before, a total of 200 college credit courses. In addition other courses may be given if requested. Courses are offered in the following subjects:

Agriculture  
Agricultural Education  
Agronomy  
Animal Husbandry

Architecture  
Art  
Bacteriology  
Botany

Chemistry  
Dairying  
Economics and Commerce  
Education

English	Mathematics	Public Speaking
Entomology	Music	Rural Economics
French	Office Training	Rural Engineering
History	Physical Education	Shop Work
Home Economics	Physics	Sociology
Horticulture	Physiology	Spanish
Latin	Poultry Husbandry	Zoology
Manual Training	Psychology	

## Subjects for State, County and Special Certificates Will All Be Offered.

<i>First Grade Certificate</i>	<i>Second Grade Certificate</i>	<i>Third Grade Certificate</i>
Agriculture	Agriculture	Agriculture
Arithmetic	Arithmetic	Arithmetic
Civics	Civics	Civics
Composition	Composition	Composition
Domestic Science	Domestic Science	Domestic Science
English Grammar	English Grammar	Geography
Geography	Geography	English Grammar
Music	Music	Oklahoma History and Government
Oklahoma History and Government	Oklahoma History and Government	Orthography
Orthography	Orthography	Physiology and Hygiene
Physiology and Hygiene	Physiology and Hygiene	Reading
Reading	Reading	Theory and Practice of Teaching
Theory and Practice of Teaching	Theory and Practice of Teaching	United States History
United States History	United States History	Writing
Writing	Writing	Music
American Literature	American Literature	
Elementary Psychology	Elementary Psychology	
Algebra		
General History		
Physics		

### *SUMMER SCHOOL BULLETIN*

An illustrated Summer School bulletin, giving detailed information regarding the courses offered will be sent upon request. Inquiries concerning the Summer School should be addressed to the Director of the Summer School.

**THE SCHOOL OF CORRESPONDENCE-STUDY**



## FACULTY

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- JAMES BURNETTE ESKRIDGE, A. M., Ph. D.; *President of the College.*
- JAMES ROBERT CAMPBELL, B. A., M. A.; *Dean of the School of Correspondence-Study.*
- LOWERY LAYMON LEWIS, B. S. A., M. S., D. V. M.; *Dean of the Faculty, Dean of the School of Science and Literature, Dean of the School of Veterinary Medicine, Professor of Veterinary Medicine, Zoology and Bacteriology.*
- HERBERT PATTERSON, A. B., A. M., Ph. D.; *Dean of the School of Education, Professor of Education.*
- MALCOLM ALFRED BEESON, B. S., D. Sc.; *Dean of the School of Agriculture.*
- HENRY FULLER HOLTZCLAW, A. B., Ph. D.; *Dean of the School of Commerce and Marketing, Professor of Economics.*
- RICHARD GAINES TYLER, C. E., B. S. in C. E.; *Dean of the School of Engineering, Professor of Civil Engineering.*
- ELLA NORA MILLER, B. S., M. S.; *Dean of the School of Home Economics, Professor of Domestic Science.*
- CARL GUNDERSEN, A. B., A. M., Ph. D.; *Professor of Mathematics.*
- CHARLES EMERSON SANBORN, A. B., A. M.; *Professor of Entomology.*
- CHARLES OSCAR CHAMBERS, A. B., A. M., Ph. D.; *Professor of Botany.*
- FRED MAAS ROLFS, B. S., M. S., Ph. D.; *Professor of Horticulture.*
- NORA AMARYLLIS TALBOT, B. S., A. M.; *Professor of Domestic Art.*
- ARTHUR CHRISTOPHER BAER, B. S. A.; *Professor of Dairying.*
- DeWITT TALMADGE HUNT, B. S.; *Superintendent of Shops.*
- HARRY EMBLETON, B. S.; *Professor of Poultry Husbandry.*
- \*HILTON IRA JONES, A. B., A. M., Ph. D.; *Professor of Chemistry.*
- LESLIE EUGENE HAZEN, B. S., M. E.; *Professor of Rural Engineering.*
- WARREN LALE BLIZZARD, B. S.; *Professor of Animal Husbandry.*
- OLIN MITCHELL CLARK, B. S.; *Professor of Agricultural Education.*
- CHARLES LEONARD KEZER, B. S., A. B.; *Principal of Secondary School, Professor of Secondary Education.*
- ALBERT SAMUEL HIATT, A. B.; *Professor of History.*
- JOHN HOFER CLOUD, A. B., A. M., Ph. D.; *Professor of Physics.*
- ALMON AI ARNOLD, A. B., A. M.; *Professor of Modern Languages.*
- WILLIAM BENJAMIN PARKS, A. M., S. M., Ph. D.; *Professor of Chemistry.*
- WILLIAM PTOLEMY POWELL, B. A., M. A.; *Professor of English.*
- AVERY LUVERE CARLSON, B. A., M. A., J. D.; *Professor of Business Administration.*
- RUTH DuBOIS, Diploma, A. B.; *Professor of Physical Education for Women.*
- SOLOMON LUTHER REED, A. B., A. M., Ph. D.; *Professor of Education.*
- ROBERT OSCAR WHITENTON, A. B., M. S.; *Associate Professor of Zoology.*
- CARL POLLARD THOMPSON, B. S., M. S.; *Associate Professor of Animal Husbandry.*
- ROBERT DuBOIS, A. B., M. S.; *Associate Professor of Chemistry.*
- AGNES BERRIGAN, B. A., M. A.; *Associate Professor of English.*
- ADRIAN DAANE, Ph. B., M. S.; *Associate Professor of Agronomy.*
- FRED McCARREL, B. S., M. S.; *Associate Professor of Education.*
- WILLARD RUDE, Diploma; *Associate Professor of Secretarial Training.*
- GLEN NEWTON BRIGGS, B. S., M. S.; *Associate Professor of Agronomy.*
- JAMES HENRY CALDWELL, *Assistant Professor of History.*
- EDWARD McCARREL, A. B.; *Assistant Professor of Mathematics.*
- WILLIAM CAMPBELL PAYNE, B. S.; *Assistant Professor of Mathematics, Secondary School.*
- LLOYD KEITH COVELLE, Certificate; *Assistant Professor in Shops.*
- EDWIN DORENCE SODERSTROM, Diploma; *Assistant Professor in Shop Practice.*
- ALBERT EDWARD DARLOW, B. S.; *Assistant Professor of Animal Husbandry.*
- ELLIS C. BAKER, B. S. in M. E.; *Assistant Professor of Mechanical Engineering.*

\*On leave of absence.

HENRY FRED MURPHY, B. S.; *Assistant Professor of Agronomy.*

DAISY DELL McCOOL, Diploma; *Instructor in Art.*

MARY ELEANOR LOCKWOOD, A. B.; *Instructor in Modern Languages.*

ALICE TRAVER, B. S.; *Instructor in Secondary School.*

ANNIE GARNER THORNTON, *Instructor in Secondary School.*

\*CHARLES MEEKS ANDERSON, B. A., M. A.; *Instructor in Economics.*

MABEL DAVIS HOLT, B. S.; *Instructor in Secondary School.*

\*On leave of absence.

## THE SCHOOL OF CORRESPONDENCE-STUDY

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This is a new school established for the express purpose of giving all persons, young and old, who desire to avail themselves of it, an opportunity to get an education. It is simply taking the College to those people who are unable to go to the College.

In correspondence-study students are permitted to select such studies as they desire to take, and such as they think will meet their needs. Consequently they can attack such subjects in a lively, interested, enthusiastic spirit.

Many men and women, and also many boys and girls, who are not in a position to attend college can get such courses as will benefit them very greatly in their work on the farm, in the home, in the shop, in the office, and, in fact, in almost all the pursuits of life. Students in high schools can get courses that will make up their work in case they have been out of school, or work that will give them advanced credit. The School of Correspondence-Study aims to offer a wide range of work, giving all classes of students an opportunity to get what they need. In fact, we expect to prepare some courses in work such as is given in the sixth, seventh, or eighth grade of the public schools, making them available for adults whose early educational advantages were poor and who are anxious to get some education.

In correspondence-study, each student receives individual attention and assistance from the instructor, thus enabling him to pursue his study with great profit. Those who have taken courses by correspondence testify to the wonderful benefits they received. The late President Roosevelt once said, "I look upon instruction by mail as one of the most wonderful and phenomenal developments of the age."

We are offering more than one hundred and fifty courses by correspondence. These courses include agriculture, engineering, home economics, science and literature, education, commerce and marketing, high school subjects, and grade studies.

*Oklahoma A. and M. College*

## SCHOOL OF AGRICULTURE

Department of Agronomy .....	5 courses
Department of Agricultural Education .....	3 courses
Department of Animal Husbandry .....	7 courses
Department of Dairying .....	2 courses
Department of Entomology .....	2 courses
Department of Horticulture .....	2 courses
Department of Poultry Husbandry .....	4 courses
Department of Rural Engineering .....	4 courses
Department of Rural Economics .....	1 course

## SCHOOL OF ENGINEERING

Department of Civil Engineering .....	1 course
Department of Mechanical Engineering .....	3 courses
Department of Shop Practice .....	12 courses

## SCHOOL OF HOME ECONOMICS

Textile Clothing and Shelter .....	1 course
Home Builder's Training .....	1 course

## SCHOOL OF SCIENCE AND LITERATURE

Department of Art .....	5 courses
Department of Botany .....	3 courses
Department of Chemistry .....	8 courses
Department of English .....	14 courses
Department of Modern Languages .....	8 courses
Department of History .....	5 courses
Department of Mathematics .....	2 courses
Department of Physics .....	6 courses
Department of Zoology .....	2 courses
Department of Physical Education (Plays, Games) .....	1 course

## SCHOOL OF EDUCATION

Educational Psychology .....	5 courses
Educational Philosophy....	5 courses
Educational Methods .....	3 courses

## SCHOOL OF COMMERCE AND MARKETING

Special Courses .....	4 courses
Freshman Year .....	2 courses
Sophomore Year .....	5 courses
Junior and Senior Years .....	5 courses

All these courses are prepared by specialists, members of the faculty in charge of the work, who are teaching them to classes in the College. They are exceptionally well qualified to prepare courses for correspondence-study.

The low cost for enrollment in correspondence-study courses should be a great incentive to all, young men and women in particular who are unable to attend college, to enroll in these courses and spend their spare hours profitably by increasing their information on a great many subjects.

## THE SECONDARY SCHOOL

C. L. KEZER, B. S., A. B.; *Principal.*  
W. C. PAYNE, B. S.; *Assistant Professor.*  
ALICE B. TRAVER, B. S.; *Instructor.*  
ANNIE G. THORNTON, *Instructor.*  
MABEL D. HOLT, B. S., *Instructor.*  
BENJAMIN C. DYESS, *Instructor.*  
RUFUS O. GOODWIN, B. S.; *Instructor.*  
MABEL CALDWELL, B. S.; *Instructor.*  
E. L. LAWRENCE, *Student Assistant.*  
C. M. BENNETT, *Student Assistant.*

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Entrance to the Secondary School requires: First, that applicant be 16 years old, if residing where a four-year high school is maintained, or 14 years old if no such high school is maintained at his home. Second, that a diploma of graduation, or certificate of promotion from the common schools of the State be presented. Third, that at least 4 units of high school work shall have been completed.

Recitation periods are fifty minutes long. Penmanship must be taken if the student is not proficient. Credit examinations are given in all branches. Grades brought from approved high schools are received on statement of Faculty Committee on Non-Accredited schools.

A certificate is granted to students completing the course with 15 units which admits to full Freshman standing in the College. Students may be admitted conditionally with 14 units, the remaining work to be made up before the end of the Freshman year. No student will be recommended for Freshman standing who has not completed the required courses. Besides required branches, the complement of units comprises such subjects as will strengthen the student for the College course in view, or for teacher's certificate requirements.

### COURSES OF STUDY

#### FIRST YEAR

(Not given during year of 1922-23.)

#### SECOND YEAR

FALL QUARTER			WINTER QUARTER		
	Cl.	Pr.		Cl.	Pr.
English IIa .....	5		English IIb .....	5	
Plane Geom. Ia .....	5		Plane Geometry Ib .....	5	
Ancient Hist. Ia .....	5		Ancient History Ib .....	5	
Manual Tr. Ia, (boys) .....		6	Manual Training, (boys) .....		6
D. A. (girls) Ia .....		6	D. A. Ib, (girls) .....		6
Phy. Ed. ....		3	Physical Ed. ....		3

*Oklahoma A. and M. College*

## SPRING QUARTER

	Cl.	Pr.
English IIc .....	5	
Plane Geometry Ic .....	5	
Ancient History Ic .....	5	
Manual Training Ic, (boys) .....		6
D. A. Ic. (girls) .....		6
Phy. Ed. ....		3

## THIRD YEAR

	Cl.	Pr.		Cl.	Pr.
American Literature IIIa .....	5		American Literature IIIb .....	5	
Physics Ia .....	4	2	Physics Ib .....	4	2
Latin, French, Spanish Ia .....	5		Latin, Fr. or Span. Ib .....	5	
Modern History IIa .....	5		Modern History IIb .....	5	
Algebra IIa .....	5		Algebra IIb .....	5	
D. S. IIa .....		6	D. S. IIb .....		6
Phy. Ed. ....		3	Phy. Ed. ....		3

## SPRING QUARTER

	Cl.	Pr.
American Literature IIIc .....	5	
Physics Ic .....	4	2
Latin, Fr. or Span. Ic .....	5	
Modern History .....	5	
D. S. IIc .....		6
Phy. Ed. ....		3

## FOURTH YEAR

	Cl.	Pr.		Cl.	Pr.
English Literature IVa .....	5		English Literature IVb .....	5	
American History IIIa .....	5		American History IIIb .....	5	
2nd Year Latin, Fr. or Span IIa .....	3		2nd Year Latin, Fr. or Span. IIb .....	3	
American Government Ia .....	4		American Government Ib .....	4	
Solid Geometry IIa .....	3		Education 121, (teachers) .....	4	
Phy. Ed. ....		3	Agriculture 107, (teachers) .....	3	4
Education 120, (teachers) .....	4		Solid Geometry IIb .....	3	
Agriculture 106, (teachers) .....	3	4	Phy. Ed. ....		3

## SPRING QUARTER

	Cl.	Pr.
English Literature IVc .....	5	
American History IIIc .....	5	
2nd Year Latin, Fr. or Span. IIb .....	3	
Oklahoma History and Civics I ....	2	
Geography I, (teachers) .....	5	
Vocal Music 123, (teachers) .....	3	
Education 122, (teachers) .....	4	
Phy. Ed. ....		3

## ELECTIVES

Arith. Ia and b .....	Winter and Spring Quarters
Algebra Ia, b, c .....	1 unit
English Ia, b, c, May be taken with the Vocational classes if needed	
Advanced English Grammar Va and b, Winter and Spring Quarters	
Typewriting .....	$\frac{1}{4}$ or $\frac{1}{2}$ unit
Shorthand .....	$\frac{1}{2}$ or 1 unit
Approved college or vocational courses	

## SUBJECTS

EDUCATION 120. Class 4 hours.

School hygiene and management. For teachers.

EDUCATION 121. Class 4 hours.

Elementary psychology. For teachers.

EDUCATION 122. Class 4 hours.

Method of teaching the common branches. For teachers.

These constitute the required one year in pedagogy for two-year State certificate, and are open to Senior Preparatory students only. For description, see School of Education in College.

ENGLISH II, a, b, c. Corresponds to English 21 and 22. Class 5 hours.

Composition and rhetoric with classics. Continued attention to oral composition as well as written. The Literary Digest or some equally satisfactory magazine will be used to furnish live topics for class discussion and written work.

ENGLISH III, a, b, c. American Literature. Class 5 hours.

Extension of English 33, to make a year's course.

ENGLISH IV, a, b, c. Class 5 hours.

English Literature, corresponding to fourth year of high school work.

ENGLISH V, a and b. Advanced Grammar.

For teachers or credit in Secondary School.

HISTORY II, a, b, c. Ancient and Medieval. Class 5 hours.

Equivalent to History 23 and 24. Library reports and special assignments required. Current event magazines will be used for topics of special interest.

HISTORY III, a, b, c. Modern. Class 5 hours.

Equivalent to 35 and 36.

OKLAHOMA HISTORY AND CIVICS IV. Class 2 hours.

Equivalent to History 41. The unique story of Indian consolidation and settlement of Indian Territory and Oklahoma. Survey of the State in education, industry and government. Many maps and supplementary matter used.

AMERICAN HISTORY IV, a, b, c. Class 5 hours.

Equivalent to History 43 and 44. High school history. Required of every secondary student. Gives grade on teacher's certificate.

AMERICAN GOVERNMENT V, a and b. Class 5 hours.

Equivalent of History 45. Prepares to teach in common schools. Pedagogy of subjects given. Course composed of two parts, how government operates, and how it is organized. Includes what is commonly called Civics. Reference work required.

ALGEBRA IIa. Class 5 hours.

Requires Algebra 1 unit as prerequisite.

Equivalent to Algebra 31 in old catalog. Consists of review of solving equations one, two and three unknowns; the factor theorem; square root; cube root; graphing of straight line and curve, etc.

ALGEBRA IIb. Class 5 hours.

For engineering course.

Equivalent to Algebra 34 in old catalog. Consists of graph of quadratic equation; exponents; radical expressions and equations dealing with radical exponents; introduction to logarithms and variation.

PHYSICS I, a, b, c. Theory 3 hours, laboratory 2 hours, examination 1 hour.

Required of all students who expect to enter regular courses in Engineering, Science and Literature, and Agriculture.

Prerequisite: Algebra 1 unit; Plane Geometry 1 unit.

Covers (a) Mechanics; (b) Heat and Electricity; (c) Light and Sound.

Text: Physics with Applications, Carhart and Chute.

GEOGRAPHY I. Class 5 hours.

Required for teachers.

Physical and commercial.

SPANISH I, a, b, c. Class 4 or 5 hours.

Essentials of Spanish grammar. Reading of easy prose. Conversation and careful training in pronunciation.

Text: "A Brief Spanish Grammar," Ingraham-Edgren; "Elementary Spanish-American Reader," Berge-Soler and Hathway.

LATIN I, a, b, c. Class 4 or 5 hours.

Drill on the Essentials of Latin grammar, requiring a vocabulary, reading stories from Roman History, and anecdotes and fables.

Text: (1) Latin Lessons, Smith; (2) Gradatim.

FRENCH I, a, b, c. Class 4 or 5 hours.

Essentials of French Grammar, with the more common irregular verbs. Reading of about one hundred pages of easy prose. Careful training in pronunciation.

Text: Fraser and Squair's grammar; Cruce's "Lectures Faciles"; Allen and Schoell's "French Life."

DOMESTIC ART I, a, b, c. Class 6 hours.

Laboratory course. Sewing: Plain stitches applied to various articles, as towels, sewing aprons, etc. Patching and darning. Machine sewing seams. Simple undergarments. Study of textiles and fibers used.

DOMESTIC SCIENCE II, a, b, c. Laboratory 6 hours.

Foods and Cookery required of all girls.

#### SHOP COURSES

CABINET MAKING Ia, Ib, Ic. Credit  $\frac{1}{3}$  unit per quarter; total 1 unit.

Shop Practice 16 hours per week. 1 year of work.

These are courses in practical cabinet making running 16 hours per week fitting the student for the trade.

MACHINE SHOP Ia, Ib, Ic. Credit  $\frac{1}{3}$  unit per quarter; total 1 unit.

Shop Practice 16 hours per week. 1 year of work.

These are practical courses, fitting students for the machinist's trade.

MANUAL TRAINING Ia, Ib, Ic. Credit 1-6 unit per quarter; total  $\frac{1}{2}$  unit.

Practice 6 hours per week.

The work in this course is similar to the high school courses usually found. About two-thirds of the time will be devoted to Mechanical Drawing and the rest to bench woodwork.

Text: "Notes for Woodwork," Hunt; "Mechanical Drawing for Secondary Schools," French and Svenson.

MANUAL TRAINING IIa, IIb, IIc. Credit 1-6 unit per quarter; total  $\frac{1}{2}$  unit.

Practice 6 hours per week.

Second year work, including advanced Mechanical Drawing and machine woodwork will be given.

Text: "Notes for Advanced Hand Woodwork."

# MILITARY SCIENCE AND TACTICS

JAMES BURNETTE ESKRIDGE, A. M., Ph. D., *President of the College*

JOSEPH BENJAMIN PATE, B. A.; Major, Inf., U. S. Army; *Commandant and Professor of Military Science and Tactics*

JOSEPH HOWARD RUSTEMEYER, Captain, Inf., U. S. Army; *Professor of Military Science and Tactics*

JOSEPH JOHN SCHMIDT, Captain, Inf., U. S. Army; *Professor of Military Science and Tactics*

JOHN MARVIN HAGENS, Captain, Inf., U. S. Army; *Professor of Military Science and Tactics*

EDWARD L. SNYDER, First Sergeant, Inf., U. S. A.; *Instructor*

JOHN H. FERGUSON, First Sergeant, Inf., U. S. A.; *Instructor*

GORDON L. LUPTON, Sergeant, Inf., U. S. A.; *Instructor*

HERMAN H. HANSEN, Sergeant, Inf., U. S. A.; *Instructor*

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Under the provisions of section 33 of the Army Reorganization Act, the President of the United States has authorized the organization of an Infantry Unit of the Reserve Officers' Training Corps at Oklahoma Agricultural and Mechanical College and the Board of Regents has agreed to establish and maintain a two-years compulsory course of military training as a minimum for physically fit male students, which course, when entered upon by any student, shall, as regards such student, be a prerequisite for graduation unless he is relieved of this obligation prescribed by the Secretary of War.

The following classes of students may be excused from military training by presenting satisfactory evidence to the Professor of Military Science and Tactics:

1. Those who have served a minimum of six (6) months in the United States Army, Navy or Marine Corps.
2. Those who have completed the freshman and sophomore years of their college work at other institutions where military training is not required.

## RESERVE OFFICERS' TRAINING CORPS COURSES

The four-year Reserve Officers' Training Corps course is divided into the basic course and the advanced course.

The basic course consists of the first two years in the military department and corresponds to the freshman and sophomore years of the academic department.

The advanced course consists of the last two years in the military department or of such shorter periods of time as may in exceptional cases be prescribed by the Secretary of War. The ad-

vanced course corresponds to the junior and senior years of the academic department.

Students taking the advanced course of the Reserve Officers' Training Corps and not having thirty hours of electives allowed in the course they are taking in the College, will be permitted to substitute R. O. T. C. for work required in their course. The substitutions are to be approved by the Dean of his school.

#### BASIC COURSE

*Obligations.*—Members of the basic course are required to pursue this course diligently until satisfactorily completed and properly to care for all equipment and apparatus used in their instruction.

*Benefits.*—a. Each student either will be furnished a complete Government uniform or be paid the commuted value of the same to be applied toward the purchase of a tailor-made uniform.

b. A limited number of students, who have satisfactorily completed at least one year of the basic course, are selected each year to attend the basic course camp at Government expense, which includes mileage at the rate of five cents per mile both to and from camp and subsistence while in camp.

c. A total of six and two-thirds ( $6\frac{2}{3}$ ) credit hours toward graduation from the College.

#### ADVANCED COURSE

The advanced course is elective. When any member of the Reserve Officers' Training Corps has completed the basic course and has been selected by the College President and the Professor of Military Science and Tactics as qualified for further training, he may be admitted to the advanced course. Completion of the advanced course shall, when entered upon by a student, be a prerequisite for graduation as regards such student, unless, in exceptional cases, he shall be discharged from the Reserve Officers' Training Corps by the Professor of Military Science and Tactics for sufficient reasons with the approval of the College President.

*Obligations.*—a. The student obligates himself to pursue the course while in college and to devote a minimum of five hours per week during such period to military training prescribed.

b. To attend the advanced course (camp training) prescribed by the Secretary of War.

c. Properly to care for all articles of equipment furnished him.

d. He is expected, although not bound, to accept a commission in the Officers' Reserve Corps if such a commission is tendered him, unless prevented by exceptional circumstances.

*Benefits.*—a. He will be allowed the commuted value of a complete Government uniform to be applied toward the purchase of a tailor-made uniform.

b. He will be paid commutation of rations at the rate fixed for the Army from the beginning of his junior year until the end of his senior year, except while attending the advanced course camp when he will be subsisted in kind. The present value of the ration is forty cents per day.

c. He will receive mileage at the rate of five cents per mile both to and from camp.

d. He will receive \$1 per day while at camp in addition to subsistence furnished.

e. He will be eligible for appointment as second lieutenant in the Officers' Reserve Corps of the United States Army upon graduation from the advanced course.

f. He will be eligible for competitive examination for appointment as second lieutenant in the Regular Army and will be entitled to certain exemptions prescribed by regulations.

g. He will be given an officer's saber and scabbard by the College upon satisfactory completion of the advanced course.

h. A total of thirty (30) credit hours toward graduation from the College.

#### *COLLEGE BAND*

The College Band is an element of the Reserve Officers' Training Corps but is under the direction and instruction of the Director of the Department of Music. Students selected as members of the Band are required first to complete the instruction prescribed in the "School of the Soldier" of the U. S. Infantry Drill Regulations before joining the Band, after which no further individual military instruction is required of them. Work done as members of the Band is credited as work done in any other element of the Reserve Officers' Training Corps unit, except toward qualification for admission to the advanced course. Members of

the Band must qualify for reserve commissions by the same standards as other members of the Reserve Officers' Training Corps.

### CREDITS

Academic credits are given for work done in the Department of Military Science and Tactics on the same basis as work done in other departments of the College, i. e., a credit is one hour of theoretical work carried for one semester, or equivalent period of the school year, or three hours of practical work carried for an equal period.

The following credits are given for each of the four years:

1st year	Basic Course	3 credits
2nd year	Basic Course	3½ credits
1st year	Advanced Course	15 credits
2nd year	Advanced Course	15 credits

### DISCIPLINE

Students taking military training will, while actually undergoing instruction, be considered as on a cadet status. Habitual inattention and carelessness while under military instruction will be considered as sufficient grounds for pronouncing the work of that student unsatisfactory and, if persisted in, will lead to his expulsion from the course.

Absences from classes or formations may be excused by an instructor only when the student presents a furlough from the Dean of the school in which he is enrolled or upon a certificate of physical disability signed by the College Physician and approved by the Dean. Furloughs and certificates of physical disability must be presented to the instructor on the first day of duty following the period of absence.

Whenever the number of unexcused absences exceeds the number of credit hours per week the instructor will drop the student from his class and report that fact to the Dean of the school in which the student is enrolled.

### COURSES OF INSTRUCTION

The four courses of instruction given in this department are described on the following pages. These courses are known as First Year Basic, Second Year Basic, First Year Advanced and Second Year Advanced, and correspond respectively to the freshman, sophomore, junior and senior years of College work.

The numbers 100, 200, 300 and 400 are used to indicate the four courses in the order enumerated in the preceding paragraph.

The additional numbers, falling within these groups, indicate individual subjects and are not intended for use outside the Military Department.

The hours of work and credits following each of the four courses are for the entire school year of three quarters. The quarter credits allowed are one-third of the total credits indicated for the course taken.

### *EQUIPMENT*

The Department of Military Science and Tactics has the following Infantry equipment:

Six hundred sets of Infantry equipment, model 1910, each set consisting of bacon can, condiment can, meat can with cover, canteen, canteen cover, pack carrier, haversack, cup, knife, fork, spoon, first aid pouch and first aid packet; 600 rifles, U. S. Magazine, caliber .30, model of 1903; 600 bayonets and scabbard, model 1903; 595 belts, cartridge, caliber .30, model 1912; 19 rifles, gallery, caliber .22, model 1903; 21 rifles, gallery, Winchester, caliber .22; 50 automatic pistols, caliber .45, model 1911; 12 revolvers, Colt, caliber .45, model 1917; 50 holsters, pistol, model 1911; 50 belts, pistol; 100 holders, cartridge, caliber .22; 60,000 cartridges, ball, caliber .30, model 1906; 24,000 cartridges, ball, caliber .45; 4,000 cartridges, blank, caliber .30; 70,000 cartridges, gallery, caliber .22; 4,500 cartridges, dummy, caliber .30; 1 gallery range indoors; 1 pistol range outdoors; 1 rifle range with 4 targets equipped to fire regular army course from 100 to 1,000 yards; 4 automatic rifles, Browning, caliber .30, model 1918; 2 machine guns, Browning, caliber .30, model 1917; 1 mortar, Stokes, 3-inch; 1 one-pounder (37 mm) gun, model 1918; 32 sketching chests, engineering; 40 sabers, 40 saber belts with slings; 3 swords, N. C. O.; 264 shovels, intrenching; 33 axes, hand, 132 pick-mattox; 33 bolos, model 1917; 33 scabbards, bolo; 55 compasses, watch; 10 litters with slings; 1 National Color; 1 College Color; 87 cutters, wire; 50 grenades, hand, dummy; 25 grenades, rifle, dummy; 8 dischargers, grenade, rifle.

### *DRUMMOND CUP*

One of the beautiful Drummond Cups is awarded annually to the member of the graduating class of the Reserve Officers' Training Corps who has attained the highest average degree of individual excellence during the entire four years course. These cups

are donated by Mr. Alfred A. Drummond of Hominy, Oklahoma, who was graduated from the School of Agriculture of this College in 1915. Mr. Drummond is a most ardent supporter of the Government's scheme of disseminating military training through the civil educational institutions of our country and in order to stimulate interest in the training at this institution he has made an endowment in favor of the Military Department the interest from which will be sufficient for the purchase of a silver cup each year.

### SUBJECTS

101-102-103 FIRST YEAR BASIC COURSE. Theory  $\frac{1}{2}$  hour, practice  $2\frac{1}{2}$  hours. Credit 3.

#### 104 INFANTRY DRILL REGULATIONS.

Text: Infantry Drill Regulations, U. S. A. (Provisional). R. O. T. C. Manual, 1st Year Basic. (Major E. B. Garey.)

1. *Practical Instruction:*

- a. Close and extended order drills to include the school of the soldier, squad, platoon and company.
- b. Military ceremonies to include the battalion.

#### 105 RIFLE MARKSMANSHIP.

Text: Rifle Marksmanship, W. D., June, 1920.

1. *Theoretical Instruction:*

- a. Lectures and talks explanatory of the general scheme and principles of rifle marksmanship.

2. *Practical Instruction:*

- a. The first, second, third, fourth and fifth steps in rifle marksmanship.
- b. Nomenclature and care of the rifle, before, during and after firing.
- c. Effect of weather conditions, sight changes, score book.
- d. Gallery practice.
- e. Range practice.
- f. Methods of coaching.
- g. General rules and definitions.

#### 106 SCOUTING AND PATROLLING.

Text: Platoon Training and Scouting and Patrolling. (The Infantry School, 1921).

1. *Theoretical Instruction:*

- a. Principles governing the composition, formation and operation of reconnoitering patrols by day and night.
- b. Difference in methods of operating in open warfare and warfare of position.

2. *Practical Instruction:*

- a. Problems and exercises in scouting and patrolling on sand table and terrain.

#### 107 PHYSICAL TRAINING.

1. *Practical Instruction:*

- a. Conducted by College Physical Director to conform with War Department training. Credits for this work are allowed under Physical Education.

# 108 MILITARY COURTESY.

Text: Methods of Instruction in Military Courtesy.

## 1. *Theoretical Instruction:*

- a. Lectures on fundamental principles of military courtesy.
- b. Relation of courtesy to military discipline and efficiency.
- c. Military courtesy of the Army of the United States.
- d. Demonstration of correct and incorrect manner of rendering courtesies.

201-202-203 SECOND YEAR BASIC COURSE. Theory 1 hour, practice 2 hours, credit 3%.

# 204 MILITARY SKETCHING AND MAP READING.

Text: Training Manual, Topography and Map Reading and Reconnaissance. Military Sketching. (Grieves.) R. O. T. C. Manual, 2d Year Basic Course. (Major E. B. Garey.)

## 1. *Theoretical Instruction:*

- a. Map reading. The instruction necessary to enable the student to read military maps with facility.
- b. Military sketching: The instruction necessary to enable the student to make road, position, and outpost sketches with standard accuracy and speed.

## 2. *Practical Instruction:*

- a. Problems in map reading. Visibility of points and areas.
- b. Practice in making road, outpost and position sketches.
- c. Combined sketching.

# 205 PHYSICAL TRAINING.

## 1. *Practical Instruction:*

- a. Conducted by College Physical Director to conform with War Department training. Credits for this work are allowed under Physical Education.

# 206 INFANTRY DRILL.

Text: Infantry Drill Regulations, U. S. A. (Provisional.) R. O. T. C. Manual, 2d Year Basic Course. (Major E. B. Garey.)

## 1. *Practical Instruction:*

- a. Close and extended order drills to include the school of the soldier, squad, platoon and company.
- b. Military ceremonies to include the battalion.

# 207 INFANTRY WEAPONS.

Text: Technical handbook of the Browning automatic rifle. Automatic Rifle Marksmanship. Manual for Hand Bombers and Rifle Grenadiers. Ordnance Pamphlet No. 1923. Bayonet Training Manual.

## 1. *Theoretical Instruction:*

- a. The Bayonet.—Lessons on the bayonet as an offensive weapon. The spirit of the bayonet, team work.
- b. The Automatic Rifle.—Lessons on the history, characteristics, marksmanship of the weapon and organization and equipment of the auto-rifleman.
- c. Hand and Rifle Grenades.—Lessons on construction and handling of the weapons, including explosives.

## 2. *Practical Instruction:*

- a. The Bayonet.—Bayonet training to include the assault course.
- b. The Automatic Rifle.—Mechanics, stripping, assembling and functioning. Immediate action. Marksmanship to include instruction up to range practice.

- c. Hand and Rifle Grenades.—Individual instruction with dummy and improved grenades.

## 208 MUSKETRY.

Text: Musketry Bulletin, A. E. F. Musketry Manual, 1922. (The Infantry School.)

1. *Theoretical Instruction:*
  - a. Weapons of the infantry squad. Theory of fire.
  - b. Range estimation, target designation, fire distribution.
  - c. Fire discipline and use of cover, individual movement, transmission of firing data, signals, replacement of casualties, and individual conduct under fire.
  - d. Fire control, application, observation, and adjustment of fire.
  - e. Control of movements, infiltration, squad and section rushes.
  - f. Conduct of fire on the defense. Duties of leaders to include the section.
  - g. Conduct of fire in attack. Duties of leaders to include the section.
2. *Practical Instruction:*
  - a. Exercises, demonstrations and tests, using landscape targets, sand table and terrain.
  - b. Combat practice (use of landscape targets, preparation and method of conducting and criticising practical lessons.)

## 209 COMMAND AND LEADERSHIP.

Text: Infantry Drill Regulations, U. S. A. (Provisional.) R. O. T. C. Manual, 2d year Basic, (Major E. B. Garey.)

1. *Theoretical Instruction:*
  - a. Lectures by commissioned officers on experiences in commanding troops, both in time of peace and in war.
2. *Practical Instruction:*
  - a. Exercise and functions of command appropriate to the grades of non-commissioned officers.

## 210 MILITARY HYGIENE SANITATION AND FIRST AID.

Text: Manual for Army Cooks. Notes on sanitary appliances. Field Sanitation. (Wilson.) Elements of Military Hygiene. (Ashburn.)

1. *Theoretical Instruction:*
  - a. Personal hygiene.
  - b. The causes of disease. The prevention and control of epidemics. The prevention of mental and nervous diseases.
  - c. Sanitation of localities, selection and drainage of camp sites.
  - d. First aid to the injured. Resuscitation.
  - e. Foods, their preparation. Hygiene of the kitchen, the barracks and camp.
  - f. Disposal of refuse.
  - g. Hygiene of moving troops.
  - h. So much as is necessary for an intelligent understanding of the fundamental importance of physical, mental and moral soundness in the soldier. Physical requirements for military service.
  - i. Comparative statistics of physical fitness of American citizens for military service in the World War.
  - j. Selection and protection of drinking water.
2. *Practical Instruction:*
  - a. Demonstrations, problems and practice in selection of camp sites, first aid and resuscitation.

301-302-303 FIRST YEAR ADVANCED COURSE. Theory 5 hours, practice 1 hour, credit 10.

### 304 FIELD ENGINEERING.

Text: Infantry Drill Regulations, Part II, U. S. A. (Provisional.) Engineer Field Manual. Engineer Training Manual. Camouflage for Troops of the Line.

1. *Theoretical Instruction*:
  - a. Elements of field engineering. Instruction to include the principles and methods of military field engineering in the various types of trenches, obstacles, shelters, machine gun emplacements, observation posts, automatic rifle emplacements, and one-pounder emplacements. Organization of working parties and assignment of tasks. Selection of location for works of defense. Concealment and camouflage.
2. *Practical Instruction*:
  - a. Solution of military engineering problems based on 1, a, above. Demonstrations on sand table. Construction on sand table, of miniature models of trenches, obstacles and other defensive works. Reconnaissance, location and laying out of work on ground. Actual construction of trenches and field works.

### 305 COMMAND AND LEADERSHIP.

Text: Infantry Drill Regulations, U. S. A. (Provisional.) R. O. T. C. Manual, 1st year advanced. (Major E. B. Garey.)

1. *Theoretical Instruction*:
  - a. Lectures by commissioned officers on experiences in commanding troops, both in time of peace and in war.
2. *Practical Instruction*:
  - a. Exercise and function of command appropriate to the grade of lieutenants.

### 306 ACCOMPANYING WEAPONS.

Text: Provisional Machine Gun Firing Manual. Machine Gun Marksmanship. 37 mm Gun Marksmanship. Light Trench Mortar Drill Regulations. Howitzer Weapons. (The Infantry School.) R. O. T. C. Manual, 1st year advanced. (Major E. B. Garey.)

1. *Theoretical Instruction*:
  - a. The Machine Gun.—Development of the machine gun. The theory of fire. Targets, ranges. Direct, indirect, overhead and night firing.
  - b. The 37 mm Gun.—History of the gun. Direct, indirect and overhead firing. Observation and adjustment of fire.
  - c. The Light Mortar.—History of the weapon. Laying the mortar. Kinds of fire. Observation and adjustment of fire.
2. *Practical Instruction*:
  - a. The Machine Gun.—Nomenclature, use, care and repair of machine guns and accessories. Mechanics, stripping, assembling and functioning. Immediate action. Exercises and demonstrations in direct and indirect fire. Use of instruments. Determining ranges. Recognition and designation of service targets.
  - b. The 37 mm Gun.—Mechanics, stripping and assembling and functioning. Construction, care and operation of the gun. Types of ammunition. School of one-pounder section. Exercises and demonstrations in direct and indirect firing.
  - c. The Light Mortar.—Construction, care and operation of the gun. Mechanics, stripping and assembling and functioning of the gun. Assembling and functioning of the bomb. Light mortar emplacements. School of the light mortar section.

## 307 MILITARY LAW AND RULES OF LAND WARFARE.

Text: Manual for Courts-martial. Rules of Land Warfare.

1. *Theoretical Instruction:*

a. Military Law.—Definition, sources and kinds of military jurisdiction. Classification and composition of courts-martial. Exercise of military jurisdiction. Persons subject to military law. Articles of war. Procedure before trial. Procedure of courts-martial. Evidence and sentences. Punishment without trial.

b. Rules of Land Warfare.—Lecture on general principles.

2. *Practical Instruction:*

a. Moot-court exercises.

## 401-402-403. SECOND YEAR ADVANCED COURSE. Theory 5 hours, practice 1 hour, credit 10.

## 404 TACTICS.

Text: Field Service Regulations, U. S. A. Infantry Drill Regulations, Parts I and II, U. S. A. (Provisional.) Minor Tactics. (Morrison.)

1. *Theoretical Instruction:*

a. General view of the organization and conduct of the battalion and higher units.

b. Principles governing the organization, armament, equipment and conduct of the rifle, machine gun, howitzer and headquarters companies in offensive and defensive combat.

c. Tactical principles governing the conduct of the platoon and smaller units in offensive and defensive combat. Details of organization, equipment and tactical employment of the rifle, machine gun and howitzer platoons in combined attack.

d. Principles governing the employment and details of conduct of covering detachments in open and position warfare.

2. *Practical Instruction:*

a. Demonstrations, exercises and problems on sand table, map and terrain in subjects covered in b, c, and d, above.

## 405. MILITARY HISTORY.

Text: Military Policy of the United States. (Upton.) American Campaigns. (Steele.) The War With Germany. (Ayres.)

A Proper Military Policy for the United States.

1. *Theoretical Instruction:*

a. Facts of American history including the World War as to: The sources of authority for our military establishment; The development of the military resources and the military strength of the United States. The state of national preparedness for war at critical periods in the history of the United States. The cost of American wars in relation to national unpreparedness.

b. Lessons from American military history as to: The traditional military policy of the United States; The need for national organization for the military defense of the nation.

## 406 ADMINISTRATION.

Text: Special Regulations Nos. 57, 72, and 120. Article XX, Compilation of General Orders, Circulars and Bulletins, W. D.

1. *Theoretical Instruction:*

a. Lectures on the practical administration of the company including interior economy and the management of the soldier.

2. *Practical Instruction:*

a. Preparation of papers pertaining to the administration of a company. So much as lieutenant should know concerning military correspondence, preparation and application of War Department forms, use and disposition of orders, bulletins and circulars.

b. Military Correspondence and Record Keeping.

# 407 COMMAND AND LEADERSHIP.

Text: Infantry Drill Regulations, U. S. A. (Provisional.) R. O. T. C. Manual, 2d year advanced. (Major E. B. Garey.)

## 1. Theoretical Instruction:

a. Lectures by commissioned officers on experiences in commanding troops both in time of peace and in war.

## 2. Practical Instruction:

a. Exercise and function of command appropriate to the grade of captain.

## MILITARY ORGANIZATION, SESSION 1921-1922

The Corps of Cadets is organized into a battalion of Infantry consisting of four rifle companies, headquarters section, machine gun and howitzer detachment, a band and bugle corps.

### PROFESSORS OF MILITARY SCIENCE AND TACTICS

Major Joseph B. Pate, Infantry, U. S. A.  
 Captain Joseph H. Rustemeyer, Infantry, U. S. A.  
 Captain Joseph J. Schmidt, Infantry, U. S. A.  
 Captain John M. Hagens, Infantry, U. S. A.

### INSTRUCTORS

1st Sergeant Edward L. Snyder, Infantry, U. S. A.  
 1st Sergeant John. H. Ferguson, Infantry, U. S. A.  
 Sergeant Gordon L. Lupton, Infantry, U. S. A.  
 Sergeant Herman H. Hansen, Infantry, U. S. A.

### CADET BATTALION FIELD AND STAFF

Major Richard Hildebrand, *Commanding*  
 First Lieutenant David D. Zink, *Adjutant*  
 First Sergeant Roy J. Burroughs, *Acting Sergeant-Major*  
 Staff Sergeant Howard O. Stout, *Color Sergeant*  
 Staff Sergeant Earl I. Nutter, *Color Sergeant*

### BAND

Major Bohumil Makovsky, *Band Leader*  
 Sergeant George W. Sadlo, *Assistant Band Leader*  
 Staff Sergeant Fred Taylor, *Drum Major*

Sergeants  
 Hendrickson, Asher  
 Scroggs, William  
 Sturgis, Alden  
 Corporals  
 Isenberg, G.  
 Bieherdorf, G.  
 Soule, E. F.  
 Sturgis, N. H.  
 Musicians, 2d Class  
 Calavan, L.  
 Smith, Norman  
 McKee, Loren  
 Swim, E. E.  
 Musicians, 3d Class  
 Dale, Dean  
 Harvey, A.  
 Folk, Charles  
 Emmons, W. H.  
 Wall, Robert  
 Hampton, Leo

Musicians, 4th Class  
 Hollingshead, E.  
 Holmes, Carl  
 Huckstep, J. T.  
 Kugel, Glen  
 Woolard, Charles  
 Fields, J. B.  
 Musicians, 5th Class  
 Slagel, Ronald  
 Hoyt, D. F.  
 Jehlicka, Boh.  
 Kugel, Co'e  
 Loneragan, John  
 Sablan, R. M.  
 Shannon, J. C.  
 Stringer, Thomas O.  
 Wiley, F. J.  
 Adams, Paul G.  
 Allender, Herbert  
 Corn, Judson  
 Eckles, J. D.  
 Feather, O.  
 Finley, Bennett

Musicians  
 Grimsley, Glenn  
 Harris, H.  
 Huff, William  
 Kugel, Paul  
 Martin, E.  
 Malkus, Lois  
 Morgan, Reginald  
 Moore, Howard  
 Pemberton, Dwayne  
 Porter, Charles  
 Shigley, Joe  
 Soule, M.  
 Stevens, Paul  
 VanBuskirk, H.  
 Varnum, Robert  
 White, Gordon  
 Young, Nolen

### BUGLE CORPS

Bugler Corporal  
 Wiedey, Donovan  
 Buglers  
 Bynum, Ralph  
 Bradley, J.

Critchlow, G.  
 Donnelley, H.  
 Gibson, G.  
 Hubbard, E.

Penny, M.  
 Shields, C. H.  
 Underwood, R.  
 Woods, G.

*Oklahoma A. and M. College*

## HEADQUARTERS SECTION

Captain Haven D. Lemmon, *Commanding*

## COMPANY "A"

Captain  
Reed, G. N.  
First Lieutenant  
Hudiburg, C. A.

Second Lieutenants  
Lowe, F. D.  
Hassler, F. R.  
Keen, C. P.

First Sergeant  
Burrough, R. J.

## FIRST PLATOON

Platoon Sergeant  
Witt, A. C.  
Platoon Guides  
Ellis, R. W., Sgt.  
Cruz, A., Sgt.  
First Squad  
Evanhoe, B. M., Cpl.  
Sublett, T.  
Critchlow, G.  
Woodyard, D. A.  
Smith, O. P.  
Klepper, W.  
Selph, R. H.  
Shaw, E. R.  
Second Squad  
Wells, W. H., Cpl.  
Bertram, E.  
Schlotterbeck, T.

Penny, O. S.  
Cowan, F.  
Cassaway, F.  
Jones, N.  
Perryman, J.  
Third Squad  
Baker, G. B., Cpl.  
Campbell, T.  
Bell, C. E.  
Mitchel, D.  
Turner, L. C.  
Connor, G.  
Snyder, S. B.  
Rennet, C.  
Fourth Squad  
Hawker, W., Cpl.  
Morris, T.  
Enlow, F.

Beeler, J. L.  
Underwood, R. G.  
Hoffsommer, L.  
Lauderdale, G.  
Bowls, D. O.  
Fifth Squad  
Montgomery, J., Cpl.  
Eppler, W.  
Abel, H.  
Cunningham, W.  
Gierhart, H. B.  
Heckle, F.  
Lewis, Leonard  
Renfrow, H. F.  
Attached Privates  
Ketch, V.  
McNees, P.  
Otey, I.

## SECOND PLATOON

Platoon Sergeant  
Hitt, J. H.  
Platoon Guides  
Penny, H. G., Sgt.  
Baugh, K. S., Sgt.  
First Squad  
Bieherdorf, F. W., Cpl.  
Warram, H.  
Higgins, L.  
Sullivan, D.  
VanValkenburg, G.  
Roller, H.  
Ege, C.  
Strange, V.

Second Squad  
Young, R., Cpl.  
Manuel, G.  
Thompson, D.  
Bandelier, E.  
Bryce, J.  
Petty, T.  
Reynolds, J. B.  
Smith, R.  
Third Squad  
Burke, O. G., Cpl.  
Lake, O.  
Gommels, B.  
Philips, E.  
Gungall, W.  
Coppage, R.

Jordan, M.  
Liebermann, L.  
Fourth Squad  
Schreiber, L., Cpl.  
Collins, O.  
Davis, H.  
Hall, M.  
Herrington, J.  
Peck, D.  
Wilson, D.  
Young, L. C.  
Attached Privates  
Goranflo, D. E.  
Woolam, M.  
Washburn, M.

## COMPANY "B"

Captains  
Moore, J. E.  
McCullough, L. E.  
First Lieutenants

McMurtrey, Jett  
Davis, P. R.  
Second Lieutenants  
Kroutil, E.

Stavely, C.  
Butler, F. T.  
First Sergeant  
Talley, B. B.

## FIRST PLATOON

Platoon Sergeant  
Beltz, A.  
Platoon Guide  
Kinkade, C., Sgt.  
First Squad  
Flood, M. W., Cpl.  
Hall, C.  
Peter, C.  
Fletcher, L.  
Scroggs, J. H.  
McVicker, J. L.  
Hartman, H.  
Alcott, S.  
Second Squad  
Snowden, I. C., Cpl.  
Marshall, C.  
Wahl, V.  
Gaunt, L.

Disney, E.  
Crutchfield, E.  
Smith, E.  
Rinearson, G.  
Third Squad  
Schlosser, W., Cpl.  
Whitthurst, G.  
Coats, W.  
Martin, L. R.  
Bentley, W.  
Toler, B.  
Nelson, R. F.  
Alcott, G.  
Fourth Squad  
Holman, O., Cpl.  
Hatfield, E.  
Klabzuba, C.  
Updyke, C.

Henderson, L.  
Kelley, W.  
Ewing, H.  
Smith, U. J.  
Fifth Squad  
Lynch, L., Cpl.  
Bradley, J. W.  
Carter, R.  
Jones, J.  
Hollingsworth, E.  
Newton, C.  
Smith, B.  
Swanner, H. T.  
Attached Privates  
Patterson, M.  
Tice, T.  
Melton, Loren

## SECOND PLATOON

Platoon Sergeant  
Gould, K., Sgt.  
Platoon Guides  
Keith, J. R., Sgt.  
McMurtrey, L., Sgt.

First Squad  
Howland, C., Cpl.  
Coke, W.  
Weaver, E.  
Ewing, F. E.

Singleton, L.  
Williams, J. L.  
Clodfelter, H. W.  
Peach, R.

Second Squad  
Incchower, C. A., Cpl.  
Leachman, O. T.  
White, P. F.  
Benson, C.  
Canfield, T.  
Latcher, D.  
Clodfelter, C. R.  
McMinn, H. L.

Third Squad  
Davis, C. C., Cpl.  
McGuire, W.  
Bengston, L.  
Moore, T.  
Lahr, W.  
Hurst, C.  
Crow, E. J.  
Shedler, C.

Fourth Squad  
Neaves, M. J., Cpl.  
Egbert, H.  
Hammy, C.  
Hagan, O.  
Pederson, R.  
Walker, R.  
Finney, W.  
Vincent, R.  
Attached Private  
Roach, M.

COMPANY "C"

Captain  
Wallace, John A.  
First Lieutenants  
Dillon, H.  
Hawes, V. B.

Second Lieutenants  
Bishop, W. J.  
Whistler, J. M.

First Sergeant  
Wells, L.

FIRST PLATOON

Platoon Sergeant  
Coleman, C. P.  
Platoon Guides  
Moore, S. H., Sgt.  
Hammons, F. W., Sgt.  
First Squad  
Roberts, E., Cpl.  
Freeman, L. S.  
Lewis, Lee  
High, L.  
Bonner, L.  
Rabon, C.  
Mielitz, G.  
Todd, F. C.  
Second Squad  
Wright, H. A., Cpl.  
Harris, P.  
Crabb, J. L.

Lowe, J. N.  
Bartley, P.  
Shidler, K.  
Constant, L. R.  
Kirk, S.  
Third Squad  
Davis, P. E., Cpl.  
Box, C.  
Thompson, T. R.  
Pratt, E. H.  
Mason, H.  
Cray, W.  
Walker, B.  
Riddle, R.  
Fourth Squad  
Pemberton, M., Cpl.  
Wells, E. A.

Stormont, R. D.  
Larrew, W.  
Howard, M. W.  
Smith, S.  
Bean, S.  
Henson, R. D.  
Fifth Squad  
Henderson, I. L., Cpl.  
Campbell, J. C.  
Conley, T.  
Dabney, W.  
Mansur, W.  
Parker, G. M.  
Puckett, H. C.  
Attached Corporals  
Reynolds, J. B.  
Stockton, H.

SECOND PLATOON

Platoon Sergeant  
Chouteau, K.  
Platoon Guides  
Smith, Coy, Sgt.  
Capalungan, A., Sgt.  
First Squad  
Carter, F., Cpl.  
Oliphant, W. A.  
Shaw, C.  
Keepers, C. F.  
Gelder, G.  
Nye, C. L.  
Babeau, C.  
Allen, W. C.

Second Squad  
Castle, E., Cpl.  
Cunningham, P.  
Taylor, J.  
Boyce, W.  
Kite, F.  
Evans, S.  
Anderson, D.  
Ward, W. K.  
Third Squad  
Hudiburg, J. A., Cpl.  
Richardson, R.  
Simmons, C.  
Krausse, E.  
Fretz, O.

Fullerton, N.  
Arnold, J.  
Swink, R.  
Fourth Squad  
Sanders, O. A., Cpl.  
West, G. W.  
Walker, N. F.  
Hettinger, H.  
Wrigley, R. C.  
Snyder, R. D.  
Jacaria, H.  
Heed, H. L.  
Attached  
Hankins, B., Cpl.  
Donnell, L., Pvt.

COMPANY "D"

Captain  
Williams, T. H.  
First Lieutenant  
Taylor, C. R.

Second Lieutenants  
Clayman, M. W.  
McWehly, F. M.  
Walsh, C. L.  
Fitzgerald, M.

First Sergeant  
Smith, W. W.

FIRST PLATOON

Platoon Sergeant  
James, R. G.  
Platoon Guides  
Stiles, M., Sgt.  
Ellithorpe, R., Sgt.  
First Squad  
Triplett, W. G., Cpl.  
Bauman, L.  
Middleton, M.  
Cobb, M. L.  
Muzzy, M. W.  
Cox, I.  
Green, A. E.  
Cunningham, R.

Second Squad  
Moore, L., Cpl.  
Belisle, F.  
McCartney, A.  
Kearns, B.  
Cope'and, F. M.  
Hinrichs, A.  
Raymond, A. T.  
Bruner, J.  
Third Squad  
Pitts, J., Cpl.  
Taylor, W. C.  
Waldrop, F.  
Higgins, R.  
Thayer, C.

Emmons, W.  
Kester, G.  
Barrett, J.  
Fourth Squad  
Witt, H. V., Cpl.  
Seiler, E. E.  
Waldrop, V.  
Stevens, D. E.  
Scott, R. G.  
Staten, H.  
Thomas, E.  
Morgan, C. W.  
Fifth Squad  
Bivens, B., Cpl.  
Beals, G.

Doak, R.  
Crawford, F.  
Wheeler, R.

East, C.  
Biscup, W.  
Hutchinson, C. C.

Attached  
Looney, T., Cpl.  
Hobbs, E., Pvt.

## SECOND PLATOON

## Platoon Sergeant

Polson, R. D.

## Platoon Guides

Bivens, C. J., Sgt.

Cermak, W., Sgt.

## First Squad

Jones, C. N., Cpl.

Harris, E.

Bunyard, D. E.

Mills, F.

Nash, L.

Dobkins, D.

Oaks, E.

Newman, J. P.

## Second Squad

Riley, R., Cpl.

Selman, J. P.

Goley, R. T.

Smith, J. A.

Denman, C.

Blackburn, R.

McMullen, C. E.

Williams, P.

## Third Squad

Farquarhar, R. P., Cpl.

McCullum, W. C.

Twidwell, R. D.

Aldridge, H. W.

Green, O. C.

Thompkins, F.

Madamba, G.

Speck, J.

## Fourth Squad

Brattin, M., Cpl.

Hitt, L.

Davis, F.

Wynn, E.

Broadie, L.

Green, F.

Nelson, S.

Foster, I. L.

## REGISTER OF STUDENTS

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The classification of students is indicated by the following abbreviations:

Agri., School of Agriculture; V. A., Vocational Agriculture; M. E., Mechanical Engineering; C. E., Civil Engineering; E. E., Electrical Engineering; Arch., Architecture; Ch. E., Chemical Engineering; H. E., School of Home Economics; V. H. E., Vocational Home Economics; S. and L., School of Science and Literature; Edu., Education; V. E., Vocational Education; C. and M., School of Commerce and Marketing; V. M., School of Veterinary Medicine; Sec., Secondary School; Bus., Business; S. S., Summer School; 1-2, first and second semester, respectively.

### GRADUATE STUDENTS

Beard, Fred J. ....	B. S., 1920 .....	Stillwater
Darlow, Albert E. ....	B. S., 1919 .....	Stillwater
French, Florence Pitzer .....	B. S., 1921 .....	Stillwater
Harnden, M. G. ....	B. S. 1917 .....	Stillwater
Hatch, Thomas .....	B. S., 1920 .....	Enid
Holt, Mrs. Mabel .....	B. S., 1921 .....	Stillwater
McKee, Mrs. Theo. ....	B. S., 1906 .....	Stillwater
Moore, Chas. S. ....	B. S., 1920; M. S., 1921 .....	Waukomis
Percival, Ruby Lauderdale .....	B. S., 1918 .....	Stillwater
Sieglinger, Leona .....	B. S., 1919 .....	Stillwater
Thompson, Carl P. ....	M. S., 1922 .....	Stillwater
Wright, Noah F. ....	B. S., 1920 .....	Cashion

### UNDERGRADUATE STUDENTS

Abel, Henry .....	C. and M., Fr. ....	1-2 Mangum
Adair, Randall W. ....	V. A. ....	1- Holdenville
Adams, Georgia .....	Bus. ....	1- Stillwater
Adams, Kriewitz .....	Arch., Fr. ....	1- Fairfax
Adams, Leland .....	C. and M., Fr. ....	1- Chickasha
Adams, Paul .....	Agri., Sr. ....	1-2 Perry
Adams, Walter H. ....	Ch. Engr., Fr. ....	1- Chickasha
Adizas, Silvino .....	Sec. ....	1-2 Barugo, Leyte, P. I.
Adkins, Harry .....	V. A. ....	1- Oklahoma
Aikman, Charlie C. ....	V. A. ....	1- Mangum
Albright, Bernadine .....	C. and M., Fr. ....	1- Stillwater
Alcott, Stanley .....	C. and M., Fr. ....	1-2 Stillwater
Alcott, Gene .....	C. and M., Fr. ....	1-2 Stillwater
Alderson, Nita .....	H. E., Fr. ....	1-2 Nash
Aldridge, Harold .....	Engr., Fr. ....	1-2 Manchester
Aldridge, Raymond .....	C. and M., Fr. ....	-2 Quinton
Alexander, Frank .....	V. A. ....	SS-1.2 Dewar
Allen, Crowder .....	Sec. ....	1-2 Oklahoma
Allen, Louise .....	Educ., Fr. ....	1-2 Idabel
Allen, Otis D. ....	V. A. ....	1-2 Meridian
Alexander, Herbert .....	Engr., Fr. ....	1-2 Elk City
Allison, Callie .....	Educ., Fr. ....	1-2 Kingfisher
Allnut, Alvin C. ....	C. and M., Soph. ....	1-2 Stillwater
Amos, S. C. ....	Special .....	SS-1.2 Sallisaw
Anderson, Donald .....	C. and M., Fr. ....	SS-1.2 Stillwater
Anderson, Edwin V. ....	C. and M., Special .....	SS-1.2 Oklahoma
Anderson, Irene .....	Educ., Fr. ....	1-2 Higgins, Texas

Anderson, Mary Louise	S. and L., Soph.	SS-1-2	Stillwater
Anderson, Nila	Educ., Special	1-	Agra
Anderson, Norman	Short Course	1-2	Waynoka
Anderson, Volma	H. E., Soph.	1-2	Omega
Armstrong, Vesta	H. E., Fr.	1-2	Custer City
Arnold, Eula	V. H. E.	SS-1-2	Clarita
Arnold, Jesse	Trades	1-2	Stillwater
Arnold, Marvin	Agri., Soph.	1-2	Beggs
Arnold, Thelma	Educ., Fr.	1-2	Claremore
Arrington, Calvin	Sec.	1-	Vinita
Atherton, Mrs. Marie	Music, Special	1-2	Stillwater
Atkinson, Cressie	S. and L., Soph.	-2	Ft. Worth, Texas
Atkinson, Ray	Engr., Jr.	1-2	Stillwater
Atwood, Viola	Educ., Fr.	1-2	Stillwater
Ault, Wayne	C. and M., Jr.	1-2	Blackwell
Austain, Ida	H. E., Soph.	1-2	Sparks
Austin, Mildred	S. and L., Fr.	1-2	Blackwell
Avartitt, Otha	C. and M., Fr.	1-	Yale
Babione, Clarence	Engr., Fr.	1-2	Thomas
Backhaus, Minnie	H. E., Soph.	SS-1-2	Guthrie
Baergen, Leonard	V. A.	1-2	Alva
Bagby, Edward	E. E., Special	1-	Stillwater
Bagby, Virginia	S. and L., Special	SS-1-2	Stillwater
Bailey, Allie	Educ., Fr.	1-2	Lamar
Bailey, Robert	V. A.	SS-1-2	Sparks
Baker, Delana Elbertson	H. E., Jr.	SS-1-2	Hodgens
Baker, Geo. B.	Educ., Soph.	1-2	Sand Springs
Baker, Oral	Engr., Soph.	1-2	Stillwater
Bakhaus, Ina Mae	H. E., Fr.	1-2	Oklahoma
Bakhaus, Orville	C. and M., Soph.	1-	Stillwater
Baldwin, Bertram	C. and M., Fr.	1-2	Anadarko
Baldwin, K. A.	Engr., Sr.	1-2	Anadarko
Ballinger, Maiva	Sec.	-1	Park Hill
Balthrop, L. D.	Short Course	-2	Ada
Balthrop, J. O.	Short Course	-2	Ada
Bandler, Edw.	C. and M., Fr.	1-2	Stillwater
Barnes, Dorothy F.	S. and L., Fr.	1-2	Stillwater
*Barnes, Frances	H. E., Fr.	SS-1-2	Stillwater
Barnes, Isaac E.	V. A.	SS-1-2	Rockland Lake, N. Y.
Barrett, F. L.	Eng., Sr.	1-2	Claremore
Barrett, Jack	Sec.	-2	Claremore
Bartholomew, Chas. A.	Bus.	1-2	Stillwater
Bartley, Pete	Engr., Fr.	1-2	Oklahoma
Barton, Ray B.	V. A.	SS-1-2	Mangum
Bartow, Arthur	Trades	1-2	Oklmulgee
Bartow, Dorothy	H. E., Fr.	SS-1-2	Oklmulgee
Bass, Edgar W.	C. and M., Special	SS-1-2	Stillwater
Bass, Mrs. Edgar	Edu., Special	SS-1-	Stillwater
Bass, Gladys Mamie	Edu., Fr.	1-2	Prague
Bass, Zella M.	H. E., Sr.	1-2	Enid
Bateman, Clara	Educ., Sr.	1-2	Soper
Bates, Mrs. L. J.	Bus.	1-	Oklahoma
Baty, Abbie	H. E., Jr.	1-2	Stillwater
Baty, Anna Josephine	Educ., Sr.	SS-2	Stillwater
Baty, Mrs. Mary	Sec.	1-	Stillwater
Baugh, K. S.	Engr., Fr.	1-2	Meeker
Bauman, Cecil	Agri., Fr.	1-2	Watova
Bauman, Leone M.	Agri., Fr.	1-2	Watova
Beals, Frank	Agri., Fr.	1-2	Watova
Beaman, Ross S.	Bus.	SS-1-	Salt Springs
Beanblossom, Floyd Z.	Agri., Sr.	SS-1-2	Girard, Ill.
Bean, Karl	E. E., Fr.	1-2	Ft. Worth, Texas
Beauchamp, Houston E.	V. A.	-2	Blevins, Ark.
Beavers, Glen	Trades	1-2	Stillwater
Bebout, Homer	Trades	-2	Oklahoma
Becknell, Doris L.	H. E., Fr.	1-	Okemah
Beeler, J. L.	C. and M., Soph.	1-2	Yukon
Beibel, Alfred G.	V. A.	SS-1-2	Brooklyn, N. Y.
Beil, Cecil W.	Engr., Jr.	1-	Sapulpa
Belisle, Fred	Engr., Fr.	1-2	Yukon
Bell, Clifton E.	C. and M., Fr.	1-2	Sayre
Belscr, Luke L.	V. A.	SS-1-2	Spiro
Beltz, Aaron	C. and M., Soph.	1-2	Ingersoll
Bendt, Isabell	Sec.	-2	Balko
Bengtson, Leroy	Agri., Fr.	1-2	Hill'sdale
Bennett, Cecil M.	Edu., Sr.	1-2	Werner
Bennett, Howard H.	V. A.	SS-1-2	Indianoma
Benson, Earl	S. and L., Fr.	1-2	Canton

\* Deceased.

# Register of Students

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Bentley, Louise	H. E., Sr.	1-2	Stillwater
Bentley, Walter J.	C. and M., Fr.	1-2	Stillwater
Berry, Dora	C. and M., Fr.	SS-1-2	Ripley
Berryhill, Earl	C. and M., Special	-2	Claremore
Bertram, Eli S.	E. E., Fr.	SS-1-2	Stillwater
Bevins, Clifford	M. E., Soph.	1-2	Stillwater
Bieberdorf, Fred	Agri., Fr.	1-2	Stillwater
Bieberdorf, Gustav	Agri., Sr.	1-2	Stillwater
Billinglea, Ruth	Educ., Jr.	1-2	Chandler
Billman, Clara	Educ., Sr.	SS-1-2	Deer Creek
Bird, Jake	Trades	-2	Shawnee
Biscup, Walter	Arch., Fr.	1-2	Shanghai, China
Bishop, Lee Roy	V. A.	SS-1-2	Dublin, Texas
Bishop, Rowlan H.	Engr., Fr.	1-2	Stillwater
Bishop, Selma	H. E., Fr.	1-2	Claremore
Bishop, W. J.	Agri., Jr.	1-2	Cabool, Mo.
Bittle, Ada A.	C. and M., Soph	SS-1-2	Orlando
Bivens, Bert	E. E., Soph	1-2	Seiling
Blackburn, Roscoe	C. E., Fr.	1-2	Marlow
Blakley, Will	C. E., Fr.	1-2	Helena
Bobo, William	V. A.	1-2	Monetta
Boerner, Carl	E. E., Sr.	1-2	Sparks
Boevers, Kenneth A.	Agri., Fr.	1-2	Mason City, Iowa
Bohier, Maude	C. and M., Fr.	1-2	Stillwater
Polin, E. L.	Educ., Sr.	SS-1	Stillwater
Bollinger, Dora	H. E., Sr.	1-2	Talihina
Bolyard, Chas. R.	C. and M., Fr.	-2	Lindsay
Bolyard, N. Wayne	Ch. E., Sr.	1-2	Lindsay
Bomark, Edna	Educ., Fr.	1-2	Pawnee
Bond, Rex	V. A.	1-2	McAlester
Bond, Miller H.	Engr., Sr.	SS-1	Boston, Mass.
Bondurant, Mary	Educ., Fr.	SS-1	Tipton
Bone, Myrtle	H. E., Soph.	1-2	Meno
Bonnell, Baker	Engr., Fr.	-2	Muskogee
Bonner, Lawrence	Engr., Soph.	1-2	Kingfisher
Bossart, Iris	Music, Special	1	Kremlin
Bouquot, Cecilia	Educ., Soph.	1-2	Woodward
Bowls, Delbert	V. A.	1-2	Nash
Bowling, Anthony V.	V. A.	SS-1-2	Cethsemane, Ky.
Bowles, Sidney J.	Agri., Soph.	1-2	New Orleans, La.
Box, Carl L.	Engr., Fr.	1-2	Shawnee
Boyce, Glen C.	C. and M., Fr.	-2	Watonga
Boyce, Willard N.	Arch., Fr.	1-2	Carmen
Boyd, Frank	C. and M., Soph.	1-2	Stillwater
Boyers, Kathryn	Educ., Soph.	1-2	Manchester
Bracken, Clifford	Agri., Jr.	1-2	Oklmulgee
Bradley, James W.	Agri., Fr.	1-2	Eldorado
Bradley, Madelaine	S. and L., Soph.	1-2	Oklahoma
Bradshaw, Claude A.	Agri., Sr.	1-2	Nowata
Brady, Liza Jane	H. E., Fr.	1-2	Haskell
Brant, Anna Dale	Educ., Fr.	SS-1-2	Ralston
Brashears, Pauline	Educ., Fr.	1-2	Bartlesville
Brattain, Wm. F.	Engr., Soph.	SS-1-2	Stillwater
Brattin, Letha	C. and M., Fr.	1-2	Stillwater
Brattin, Merle	Agri., Fr.	1-2	Stillwater
Brawdy, Dave	Bus.	1	Mannsville
Briggs, Helen	H. E., Soph.	SS-1-2	Stillwater
Briggs, James L.	V. A.	SS-1-2	Stillwater
Briscoe, Frank	Agri., Sr.	1-2	Perry
Broadie, Eunide	H. E., Fr.	1-2	Granite
Broadie, James L.	Engr., Fr.	1-2	Granite
Brock, Paul W.	C. and M., Fr.	SS-1-2	Stillwater
Brooks, Alma	H. E., Jr.	1-2	Ardmore
Brooks, Bernice	H. E., Fr.	1-2	Red Fork
Brooks, Frank G.	Short Course	-2	Harrison, Ark.
Brooks, Malcolm J.	C. and M., Fr.	1-2	Randlett
Brouse, Geo. Dewey	Engr., Fr.	1-2	Claremore
Brower, Ruth	Bus.	1-2	Stillwater
Brown, Alta Sue	Sec.	1-2	Garvin
Brown, Clara Jane	H. E., Fr.	SS-1-2	Cushing -
Brown, G. W.	C. and M., Fr.	1	Granite
Brown, Joe	C. and M., Fr.	1-2	Ardmore
Brown, John A.	Sec.	1	Bonner
Brown, Robert O.	C. and M., Soph.	1	Hilldale
Brown, Wm.	Trades	1	Custer
Brown, Bernard G.	Arch., Soph.	SS-1-2	Paragould, Ark.
Bruner, J. J.	Engr., Soph.	SS-1-2	Chickasha
Bryce, John W.	C. and M., Fr.	1-2	Stillwater
Buchanan, Hobart L.	S. and L., Fr.	1	Enid
Buck, Maude	Educ., Fr.	1-2	Mounds

Budzene, Anna	Bus.	SS-1-2	Orlando
Bull, Almond D.	Agri., Fr.	1-2	Crawford
Buller, Alfred J.	Agri., Special	SS-1-	Perryton, Texas
Bunyard, D. I.	Agri., Jr.	1-2	Stillwater
Bunyard, J. I.	Short Course	2	Stillwater
Burford, Clarence	Agri., Fr.	1-2	Lindsay
Burford, O. D.	C. and M., Fr.	1-2	Waukomis
Burke, Louiso	Educ., Fr.	1-2	Oklahoma
Burke, Marguerite	Music, Special	1-	Stillwater
Burk, Othie G.	S. and L., Fr.	1-2	Wakita
Burleson, Creasie	C. and M., Fr.	1-2	Minco
Burns, Rita	Music, Fr.	1-2	Oklahoma
Burright, Ora Blanche	S. and L., Sr.	1-2	Mulhall
Burright, Ivy	Sec.	1-2	Mulhall
Burright, Reba	Sec.	1-2	Mulhall
Burroughs, Roy J.	Agri., Soph.	SS-1-2	Stillwater
Bushyhead, Edward R.	S. and L., Fr.	1-	Claremore
Bussell, Jim B.	Agri., Special	1-2	Gracemont
Butler, Frank T.	Engr., Soph.	1-2	Tulsa
Butler, Ruth	H. E., Sr.	1-2	Guthrie
Bynum, Ralph N.	C. and M., Fr.	1-2	Tulsa
Cady, Hazel	Educ., Soph.	1-2	Red Rock
Calame, Harry	Trades	1-2	Stillwater
Calavan, Louis M.	C. and M., Soph.	1-2	Kingfisher
Calhoun, Clarence H.	V. A.	SS-1-	Marlow
Calloway, Irene J.	Music, Special	1.	Stillwater
Calloway, Marshall	Sec.	1.	Stillwater
Calmes, William E.	C. and M., Fr.	1-2	Clinton
Cameron, Chas. F.	Engr., Jr.	1-2	Stillwater
Campbell, Frances	Educ., Jr.	1-2	Oklmulgee
Campbell, J. C.	Engr., Fr.	1-2	Oklmulgee
Campbell, Ted	C. and M., Fr.	2	Waukomis
Campbell, Walter F.	Agri., Jr.	1-2	Tulsa
Canfield, Roy E.	Ch. Engr., Sr.	1-2	Yale
Canfield, Theodore	C. and M., Fr.	1-2	Yale
Cannon, Alvin L.	V. A.	2	Oklahoma
Cannon, Lloyd	Sec.	2	Stillwater
Cannon, Ellis B.	C. and M., Jr.	2	Waukomis
Capalungan, Augustine V.	Agri., Soph.	1-2	San Nicholas, I. Norte
Caperton, Polk	V. A.	SS-1-2	Centrahoma
Capstick, Mary	Educ., Fresh	SS-1-2	Pawnee
Carleton, Howard	Agri., Sr.	1.	Stillwater
Carlisle, Robert	Sec.	1.	Stillwater
Carpenter, C. H.	Agri., Sr.	SS-1-	Warner
Carroll, Ed L.	V. A.	1-2	Valley Springs, Ark.
Carroll, Willie H.	Trades	1-2	Oklahoma
Carter, Frank	Agri., Fr.	2	Ardmore
Carter, J. T.	Agri., Sr.	SS-1-2	New Market, Tenn.
Carter, Ovie	Bus.	1.	Stillwater
Carter, Ozie	Short Course	1.	Stillwater
Carter, Raymond	Agri., Fr.	1-2	Blake
Carter, Verna, Mrs.	H. E., Special	SS-1-2	Stillwater
Cash, James H.	Sec.	1.	Stillwater
Cash, Mary Frances	H. E., Fr.	SS-1-2	Stillwater
Cassell, Lark	V. A.	SS-1-2	Pocasset
Cassell, Mrs. Mabel	H. E., Fr.	SS-1-2	Pocasset
Casile, Ernest L.	Agri., Soph.	1-2	Duncan
Casile, Roy	Agri., Fr.	1.	El Reno
Cawood, Ernest	Sec.	1.	Stillwater
Cawood, Howard	C. and M., Special	1-2	Stillwater
Cermak, Adolph	Short Course	1.	Red Rock
Cermak, Anna	V. H. E.,	1-2	Red Rock
Cermak, Wesley	Engr., Fr.	1-2	Red Rock
Chambers, Harry M.	Agri., Sr.	1-2	Grandfield
Chappell, S. R.	C. and M., Special	SS-1-2	Enid
Chase, E. L.	Agri., Special	SS-1-2	Stillwater
Chase, Mrs. Elizabeth	H. E., Special	SS-1-2	Stillwater
Chase, Price	C. and M., Fr.	1-2	Tulsa
Cheatham, James, Jr.	Engr., Jr.	1-2	Warwick
Cheatham, Vera	H. E., Jr.	1-2	Warwick
Childs, Carrie	Educ., Fr.	1-2	Nash
Chouteau, Karl	Agri., Soph.	1-2	Nowata
Chrystal, Amy	Sec.	2	Goodnight
Chrystal, Bee	Educ., Jr.	2	Goodnight
Church, Ercyle	H. E., Fr.	SS-1-2	Stillwater
Church, Merle R.	Engr., Soph.	1-2	Barlesville
Clark, Aubrey E.	Sec.	1-2	Mangum
Clark, Everett R.	V. A.	1-2	Mangum
Clarke, Donald	Agri., Soph.	2	Henryetta

# Register of Students

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Clause, Emma Lillian	H. E., Soph.	1-2	Helena
Clause, Grace Ellen	S. and L., Jr.	1-2	Helena
Clause, Ralph	Sec.	1-2	Helena
Clayman, Milton	Ch. Engr., Jr.	1-2	Bart esville
Clingenpeel, Lillie	Educ., Fr.	SS-1-	Stillwater
Clingenpeel, Lova	H. E., Fr.	1-2	Stillwater
Clingenpeel, Mrs. Stanley	Sec.	-2	Stillwater
Clodfelter, Clifford	Educ., Fr.	1-2	Enid
Clodfelter, Harmon	Educ., Fr.	1-2	Marshall
Close, Lillian Irene	Bus.	-2	Stillwater
Cloud, Graco	Bus.	1-2	Stillwater
Cloutier, Deoda	V. A.	SS-1-	Ware, Mass.
Clymer, Alma	H. E., Soph.	SS-1-2	Oklahoma
Coats, Wm.	C. and M., Fr.	1-2	Sapulpa
* Cobb, Beckham	Trades	SS-1-2	Birmingham, Ala.
Cobb, Emily	Educ., Fr.	1-2	Okeene
Cobb, Harry F.	V. A.	1-	Wagoner
Cobb, Hutton Vore	C. and M., Special	SS-1-2	Vinita
Cobb, Irene	H. E., Jr.	SS-1-2	Wagoner
Cobb, Lida Mae	H. E., Sr.	1-2	Eddy
Cobb, M. L., Jr.	E. E., Fr.	1-2	Waynoka
Cobb, S. S., Jr.	C. and M., Fr.	-2	Wagoner
Coblentz, Anna	Sec.	SS-	Chandler
Coe, Irene	H. E., Fr.	1-2	Mannsville
Coffer, Geo. V.	V. A.	SS-1-2	Hastings
Coffey, May	H. E. Sr.	1-2	Goodwell
Coffman, Rivers M.	Agri., Fr.	1-2	Holdenville
Coffield, Jefferson D.	V. A.	SS-1-2	Ft. Smith, Ark.
Cogburn, Berl	C. and M., Soph.	SS-1-2	Coalgate
Coke, Henderson	C. and M., Fr.	1-2	Eldorado
Coleman, C. P.	Agri., Fr.	SS-1-2	Walters
Collins, Ormand	C. and M., Fr.	1-2	Cushing
Colins, Yvon	V. A.	1-2	Coffeyville, Kan.
Colvin, Carl	C. and M., Fr.	1-	Roosevelt
Comer, Sadie	H. E., Fr.	1-2	Claremore
Compton, Ralph	Bus.	SS-1-2	Stillwater
Conley, Tom	Agri., Fr.	-2	Lexington
Connor, Geo.	C. and M., Fr.	-2	Sapulpa
Constant, Bevins, Florence	Educ., Fr.	1-2	Blackburn
Constant, Lloyd R.	Agri., Fr.	1-2	Fletcher
Cook, John F.	Sec.	1-2	Stillwater
Cooper, Allen	Trades	-2	Stillwater
Cooper, Hugh A.	V. A.	SS-1-2	Gay
Cooper, O. C.	Trades	1-2	Stillwater
Cooper, Richard	Sec.	1-2	Stillwater
Copeland, Fred	Agri., Soph.	1-2	Alex
Coppadge, Raney	C. and M., Fr.	1-2	Stillwater
Coppock, John M.	V. A.	SS-1-2	Idabel
Corn, Judson	Engr., Fr.	1-2	Elk City
Cornet, Beatrice	V. H. E.	1-2	Pawhuska
Correll, Ellen	H. E., Sr.	1-2	Stillwater
Correll, Esther May	H. E., Jr.	1-2	Stillwater
Coryell, Irving C.	C. and M., Soph.	1-2	Chickasha
Couch, Earl	C. and M., Fr.	1-2	Stillwater
Courtney, Eva Lena	H. E., Fr.	1-	Yale
Courtright, Claiborne	V. A.	1-2	Perkins
Cowan, Frelan	C. and M., Fr.	1-2	Mangum
Cowen, Herman R.	Sec.	1-2	Ray
Cox, Irvan	Agri., Fr.	1-2	Anadarko
Cox, Rufus F.	Agri., Jr.	1-2	Clinton
Cox, Victoria	H. E., Fr.	1-2	Oklahoma
Coyner, Fred M.	Short Course	1-	Edmond
Coyner, Raymond	Sec.	1-2	Edmond
Crabb, J. L.	Engr., Fr.	1-2	Shawnee
Crabtree, C. L.	Agri., Soph.	SS-1-2	Stillwater
Crabtree, Early C.	C. and M., Soph.	SS-1-	Stonewall
Crabtree, Edith	Music, Fr.	-2	Oklahoma
Craft, Gertie	C. and M., Special	1-	Stillwater
Craft, Martin W.	Sec.	1-2	Stillwater
Craft, Paul V.	C. and M., Soph.	SS-1-2	Gate
Craig, Lee	C. and M., Fr.	SS-1-2	Tuttle
Craig, Leona Mae	Sec.	SS-1-2	Red Rock
Craven, Edward M.	C. and M., Special	SS-1-2	Stillwater
Crawford, Frank	Agri., Fr.	1-2	Pecan Gap, Texas
Crawford, J. C.	E. E., Soph.	1-2	Ladonia, Texas
Crawford, Kyle	V. A.	SS-1-	Mt. Selman, Texas
Critchlow, Garland	C. and M., Fr.	1-2	Hunter
Cross, Joel R.	V. A.	SS-1-2	Fort Wayne, Ind.
Crothers, Nina	S. and L., Fr.	1	Geary
* Deceased.			

Crow, E. J.	C. and M., Fr.	1-2	Pampa, Texas
Crutchfield, Edgar	C. and M., Fr.	1-2	Stillwater
Cruz, Antonio	S. and L., Fr.	SS-1-2	Agana, Guam
Culbertson, Roy	Trades	1-2	Hobart
Cummins, Carl	Trades	1	Laverne
Cunningham, E. C.	C. and M., Special	1	Stillwater
Cunningham, Paul	M. E., Fr.	1-2	McKinney, Texas
Cunningham, Rex	Arch., Fr.	1-2	Stillwater
Cunningham, S. F.	C. and M., Special	-2	Spencer, W. Va.
Cunningham, Hollis	C. and M., Fr.	1-2	Jennings
Curnutt, Vivian	H. E., Sr.	1-7	Broken Arrow
Curnutt, Vida	H. E., Soph.	1-2	Broken Arrow
Currie, Harry E.	Agri., Sr.	1-2	Shawnee
Dabney, Ward	Engr., Fr.	-2	Muskogee
Dailey, Truman	C. and M., Special	SS-1	Red Rock
Dale, Dean	Engr., Jr.	SS-1-2	Stillwater
Dale, Thos.	Agri., Soph.	SS-1-2	Stillwater
Dame, Floyd	Short Course	1	Hayward
Daniels, Harold	C. and M., Soph.	1-2	Stillwater
Darlow, Clara Priest	H. E., Sr.	1-2	Sabetha, Kansas
Darlow, Margaret C.	Educ., Soph.	SS-1-2	Glencoe
Darrow, Frank R.	V. A.	SS-1-2	Mustang
Davis, Arthur H.	Agri., Sr.	1	Enid
Davis, Clarence	Sec.	1	Stillwater
Davis, Claude F.	S. and L., Sr.	1-2	Medford
Davis, Con C.	C. and M., Soph.	1-2	Spur, Texas
Davis, Emma	V. H. E.	SS-1-2	Stillwater
Davis, Ethel	H. E., Sr.	SS-1-2	Paden
Davis, Frank J.	Agri., Fr.	1-2	McAlester
Davis, Hawthorne	S. and L., Fr.	SS-1-2	Stillwater
Davis, Jessie Lee	H. E., Fr.	1-2	Texola
Davis, Paul R.	Ch. Engr., Jr.	SS-1-2	Stillwater
Davis, J. M.	V. A.	SS-1-2	Tecumseh
Davis, Perry	E. E., Fr.	1-2	Stillwater
Dawson, Fareld	Sec.	1-2	Stillwater
DeMoss, Grace	V. H. E.	SS-1-2	Stillwater
Dean, Clifford L.	C. and M., Soph.	1-2	Ryan
Deaton, Dona	Bus.	1-2	Stillwater
DeCramer, Vivian	H. E., Soph.	1-2	Stillwater
Deem, Isabell	Educ., Soph.	SS-1-2	Purcell
Deer, James O.	V. A.	SS-1-2	Carney
deGruchy, Ida	S. and L., Soph.	-2	Kiowa
Delafosse, C. M.	Short Course	1	Palestine, Texas
Deming, Paul	V. A.	1-2	Chandler
Denman, Clyde H.	Trades	1-2	Stillwater
Denman, Isola	H. E., Soph.	SS-1-2	Stillwater
Denman, Mrs. R. S.	Sec.	SS-1-2	Stillwater
Denman, Roger S.	Agri., Jr.	SS-1-2	Stillwater
Dennis, Georgia	Bus.	1-2	Stillwater
Denton, Faye	C. and M., Soph.	1-2	Blackwell
Denton, Margaret	Educ., Fr.	1-2	Newkirk
Deonier, Marshall	Sec.	SS-1-2	Harrah
Deonier, William	Sec.	-2	Harrah
Dickerson, L. L.	Arch., Sr.	1-2	Atoka
Diehr, Eugene	Arch., Fr.	1	Oklahoma
Dillon, Herbert	Engr., Soph.	1-2	Jet
Disney, Elmer	C. and M., Fr.	1-2	Garber
Divine, Finis L.	Sec.	1-2	Perry
Divine, Johnnie W.	V. A.	1-2	Perry
Dixon, Herbert L.	C. and M., Sr.	1	Wewoka
Doak, Roy G.	Engr., Fr.	1-2	Ardmore
Dobkins, Dolmar	Agri., Fr.	1-2	Marlow
Donley, Wade	Engr., Fr.	1-2	Clinton
Donnell, Leonard	Engr., Fr.	1-2	Luther
Donnelley, H. F.	C. and M., Fr.	-2	Enid
Donovan, D. E.	Arch., Sr.	1-2	Kremlin
Doss, H. A.	Trades	1-2	Stillwater
Dotter, Ralcigh	Short Course	1	Stillwater
Doub, Jeanette	Music, Special	1-2	Stillwater
Dowdy, Lois	Educ., Fr.	-2	Haskell
Downey, Helen	H. E., Sr.	1	Stillwater
Downey, Wm.	C. and M., Jr.	SS-1-2	Stillwater
Drake, Albin	Trades	1-2	Glencoe
Dryden, Oran	Trades	1-2	Stillwater
Duffy, Mrs. Nona	Music, Fresh	1-2	Wichita Falls, Texas
Dunavan, Ralph	C. and M., Sr.	1-2	Enid
Duncan, Thalbert A.	Engr., Fr.	1	Mineral Wells, Texas
Dyche, Leonard	Engr., Fr.	1-2	Marshall
Dye, Ruby	Bus.	1-2	Stillwater

# Register of Students

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Dyess, Mrs. Alice	Educ., Special	-2	Stillwater
Dyess, Ben C.	Educ., Jr.	1.2	Stillwater
Dynes, Evlyn	H. E., Fr.	SS-1.2	Purcell
Earl, George F.	Engr., Fr.	1.2	Stillwater
East, Clifford	Engr., Fr.	1.2	Jet
Eaton, Donald R.	C. and M., Fr.	1	Shreveport, La.
Eaton, W. R.	C. and M., Fr.	1.2	Shreveport, La.
Echles, J. D.	Music, Special	1.2	Houstomia, Mo.
Edmonson, Myrle	H. E., Fr.	SS-1.2	Chandler
Edwards, Carmelita	H. E., Fr.	SS-1.2	Stillwater
Edwards, Eugenia	Educ., Soph.	SS-2	Stillwater
Edwards, Marv	H. E., Sr.	1.2	Medford
Edwards, Teddie	Sec.	1.2	Ocarcho
Edwards, Walter D.	C. and M., Spec.,	SS-1.2	Stillwater
Efurd, Otho M.	V. A.	SS-1.2	Hackett, Ark.
Egbert, Harold D.	C. and M., Fr.	1.2	Chandler
Ege, Claude C.	V. A.	1.2	Balko
Elledge, L. E.	Educ., Spec.	1.2	Stillwater
Ellis, Ben F.	C. and M., Soph.	1.2	Soper
Ellis, Lois	Educ., Fr.	1.2	Stillwater
Ellis, Ruben W.	C. and M., Soph.	SS-1.2	Abeline, Texas
Ellithorp, Roy	Agr., Fr.	1.2	Meeker
Emert, Glen O.	Sec.	1.2	Stillwater
Emert, Ray O.	Sec.	1.2	Stillwater
Emmons, W. H.	Educ., Soph.	1.2	Vinita
Emmons, Wendall	Agrl., Fr.	1.2	Marlow
Enlow, Frank	Engr., Fr.	-2	Stillwater
Enlow, Margaret	Educ., Jr.	-2	Stillwater
Enlow, Russell C.	C. and M., Fr.	1.2	Enid
Enlow, Ruth	S. and L., Jr.	1.2	Stillwater
Ensworth, H.	Special	1.2	Ardmore
Enriquez, Francisco	Trades	1	Billings
Epperson, Lena	Educ., Fr.	1.2	Yale
Eppler, Walter G.	C. and M., Soph.	1.2	Kansas City, Kansas
Eskridge, Joe A.	C. and M., Jr.	1.2	Stillwater
Eskridge, Mary Olive	H. E., Jr.	1.2	Stillwater
Esslinger, Mabel D.	H. E., Fr.	1.2	Broken Arrow
Ethridge, Raymond	C. and M., Soph.	1.2	Cold Springs
Evanhoe, Bernard G.	C. and M., Fr.	1.2	Ralston
Evanhoe, Constance	Educ., Fr.	SS-2	Ralston
Evanhoe, Irene	Educ., Special	SS-1.2	Ralston
Evans, Floyd A.	Engr., Fr.	1.2	Helena
Evans, Sevier	Engr., Fr.	1.2	Waurika
Ewing, Eric	C. and M., Fr.	1.2	Stillwater
Ewing, Hershell	C. and M., Fr.	1.2	Madill
Ewing, Uneeta	Sec.	1.2	Sharon
Ewing, Wineva	Sec.	1.2	Sharon
Eyler, Esther	H. E., Fr.	1.2	Stillwater
Eyler, Martha	H. E., Fr.	1.2	Stillwater
Eyler, Naomi Jane	H. E., Fr.	1.2	Stillwater
Fannin, H. J.	Engr., Fr.	1	Spiro
Farbro, Clell	Bus.	1.2	Centralia
Fariss, Cata	H. E., Fr.	1.2	Liedey
Farnsworth, Carl	Educ., Special	1.2	Stillwater
Farnsworth, Mrs. C. J.	S. and L., Spec.	1.2	Stillwater
Farquahr	Engr., Fr.	1.2	Lawton
Farrington, Olin	Agrl., Sr.	SS-1.2	Anadarko
Farrington, Paul L.	Engr., Soph.	1.2	Carmen
Feather, Othel	Arch., Fr.	1.2	Walters
Fellows, Leland	Engr., Soph.	1.2	Stillwater
Ferguson, R. F.	Arch., Soph.	1.2	Carnegie
Farrell, Mary	V. H. E.	-2	Lebanon
Fetzer, Goldie	H. E., Fr.	1.2	Helena
Fetzer, Treca	H. E., Fr.	-2	Helena
Fidler, Ralph E.	C. and M., Fr.	1	Roosevelt
Fields, J. Burford	C. and M., Fr.	1.2	Stillwater
Finley, Bennett	C. and M., Fr.	1.2	Antlers
Finney, W. D.	Agrl., Jr.	1.2	Ft. Cobb
Finney, W. Fr.	C. and M., Fr.	1.2	Ft. Cobb
Fiscus, Wilburr	C. and M., Fr.	SS-1.2	Stillwater
Fish, Alvin H.	V. A.	1	Ft. Worth, Texas
Fisher, Donald	V. A.	1.2	Kingsfisher
Fisher, Golda	H. E., Soph.	1.2	Stillwater
Fisher, Irene	C. and M., Jr.	1.2	Stillwater
Fitzgerald, Milton	C. E., Soph.	1.2	Sunset
Fletcher, John Luther	V. A.	1.2	Stillwater
Flood, Millard H.	C. and M., Fr.	1.2	Shawnee

Florence, Dave	C. and M., Sr.	1-2	Stillwater
Flower, Florence	Sec.	1	Stillwater
Floyd, Curtis	Agri., Sr.	SS-1-2	Ada
Floyd, Lena	Educ., Fr.	SS-1-2	Bentonville, Ark.
Floyd, Rossie	Agri., Sr.	1-2	Columbia, Tenn.
Folliart, Jess	C. and M., Fr.	1-2	Enid
Folk, Chas.	H. E., Jr.	1-2	Yukon
Forbes, Stanley	Engr., Special	SS-1-2	Stillwater
Foreman, Claude	V. A.	1-2	Hickory
Foster, David H.	Ch. Engr., Jr.	1-2	Stillwater
Foster, Don C.	Agri., Jr.	SS-1-2	Kingfisher
Foster, Gladys	C. and M., Fr.	1-2	Oklahoma
Foster, Ivan	C. and M., Fr.	1-2	Stillwater
Foster, Katie Lee Mahaffey	H. E., Sr.	SS-1-2	Stillwater
Foster, Scottie	Sec.	1	Oklahoma
Foster, C. Thompson	C. and M., Spec.	SS-1	Perry
Fountain, Alice	Agri., Soph.	1-2	Tulsa
Foust, Ralph	V. A.	1-2	Miami
Fowler, Arnold	Sec.	1-2	Stillwater
Fox, Argus M.	Educ., Sr.	1-2	Weatherford
Fraley, Bennie Mae	H. E., Fr.	1	Ardmore
Francis, Geo. A.	S. and L., Soph.	1	Muskogee
Franklin, Mrs. Anna	Sec.	1	Elk City
Franklin, C. A.	Educ., Special	1-2	Elk City
Frazier, F. O.	C. and M., Fr.	SS-1-2	Stillwater
Freeing, J. L.	C. F., Soph.	1	Sapulpa
Freeman, Lawrence S.	Engr., Soph.	2	Stillwater
French, Logan	V. A.	SS-1-2	Willow
Fretz, Ora G.	E. E., Fr.	1-2	Guthrie
Friedemann, A. P.	Engr., Sr.	SS-1-2	Stillwater
Frost, E. N.	Educ., Sr.	SS-2	Stillwater
Frost, Mark	Engr., Soph.	1-2	Stillwater
Fry, Floyd V.	Arch., Soph.	1	Thomas
Fry, Gertrude	H. E., Fr.	1-2	Claremore
Fry, Harold J.	Engr., Fr.	1	Blair
Fry, Mabel	H. E., Fr.	1-2	Thomas
Fry, Marie	Educ., Fr.	1-2	Claremore
Fulbright, Clothide	H. E., Soph.	1-2	Elgin
Fullerton, Neil	Engr., Fr.	1-2	Lawton
Gaddis, Preston G.	Engr., Fr.	1-2	Bartlesville
Gardiner, Robert E.	Agri., Special	1-2	Ft. Worth, Texas
Garlock, Bertha	H. E., Sr.	1-2	Richmond
Gassaway, Frank	C. and M., Fr.	2	Stillwater
Gaunt, Lionel	C. and M., Fr.	1-2	Stillwater
Gearhart, H. Barton	H. E., Fr.	1	Hobart
Gelder, Geo. B.	E. E., Fr.	1-2	Yale
Gibson, Geo.	C. and M., Fr.	1-2	Garber
Gierhart, Ray	C. and M., Fr.	1-2	El Reno
Giger, Marion J.	V. A.	SS-1	Rush Springs
Gilbert, Mrs. Bertha	Educ., Special	SS-2	Stillwater
Gilliam, Walter H.	S. and L., Sr.	2	Stillwater
Gilliam, Mrs. Walter	Educ., Soph.	2	Stillwater
Gilliland, Buford J.	Agri., Special	1-2	Seminole
Gillispie, Samuel E.	Bus.	1-2	Hooker
Gilstrap, Lee F.	C. and M., Fr.	1-2	Washington, D. C.
Glover, Joe Neil	H. E., Fr.	SS-1-2	Stillwater
Goddard, Ira T.	Agri., Fr.	2	Keota
Goley, Agnes	H. E., Soph.	1-2	Perry
Goley, Ralph	Agri., Fr.	1-2	Perry
Gommels, Barkley	C. and M., Fr.	1-2	Mt. View
Gooch, Everett	Engr., Sr.	1-2	Agra
Gooch, Glenn	Sec.	1-2	Agra
Gooch, Jay C.	V. A.	1-2	Cement
Goodho'm, Ruth	Music, Special	SS-1	Stillwater
Goodman, Richie	Sec.	1-2	Hastings
Goodwin, Mrs. R. Q.	Educ., Sr.	SS-1-2	Stillwater
Goodwin, Bill T.	Agri., Special	SS-1-2	Heavener
Goranflo, Wilber E.	Agri., Soph.	1	Quinlan
Goranflo, D. E.	Agri., Fr.	1-2	Waynoka
Gordan, Earl E.	V. A.	2	Miami
Gotcher, E. A.	V. A.	1-2	Pauls Valley
Gould, Brenda	H. E., Sr.	1-2	Stillwater
Gould, King	Engr., Soph.	1-2	Stillwater
Gourley, Lawrence	C. and M., Soph.	1	Grandfield
Grady, Lucille	Music, Fr.	1-2	Stillwater
Graham, Carl	C. and M., Fr.	1	Yale
Graham, Florence	H. E., Soph.	1-2	Nowata
Graham, H. A.	V. A.	SS-1-2	Abbott, Ark.
Graham, Horace	V. A.	1-2	Bomer

Graham, Jewel B.	S. and L., Fr.	SS-1-2	Frederick
Graves, Estelle	H. E., Soph.	SS-1-2	Stillwater
Graves, Helen	C. and M., Jr.	1-2	Stillwater
Gray, Wm. Denton	Agri., Fr.	1-2	Oklahoma
Green, Arthur E.	Engr., Fr.	1-2	Wakita
Greene, Frank	Engr., Fr.	1-2	Yale
Green, James	C. and M., Fr.	1-2	Chandler
Green, James L.	C. and M., Sr.	1-2	Lone Wolf
Greene, Orley	Trades	1-2	Stillwater
Green, Willie	V. A.	SS-1-2	Hastings
Greiner, Agnes	H. E., Sr.	1-2	Stillwater
Griffith, Joseph E.	Sec.	1	Duke
Grimsley, Glenn M.	Agri., Fr.	1-2	Chickasha
Grimsley, J. T.	Ch. E., Soph.	1-2	Pawnee
Griswold, Betty	Educ., Fr.	1-2	Guthrie
Groninger, Haskell	V. A.	1-2	Haskell
Grow, Ena	H. E., Sr.	SS-1-2	Clinton
Grunden, Floyd	V. A.	1-2	Seneca
Gulley, Dorothy	H. E., Fr.	-2	Oklahoma
Gungoll, Walter	Educ., Fr.	-2	Waukomis
Guthrie, Mrs. Hazel	Educ., Sr.	SS-1-2	Stillwater
Guthrie, Mike	V. A.	SS-1	Kaufman, Texas
Hafner, V. L. O.	Agri., Jr.	SS-1-2	Stillwater
Hagan, Olin G.	C. and M., Fr.	1-2	Watonga
Hagens, Capt. J. M.	Special	-2	Stillwater
Hale, Josephine	Educ., Jr.	1-2	Pryor
Hale, Lloyt	Educ., Fr.	1-2	Pawnee
Hall, Beatrice	H. E., Soph.	1	Mangum
Hall, Clyde	C. and M., Fr.	1-2	Stillwater
Hall, Geo. W.	Engr., Jr.	SS-1	Mangum
Hall, Grace	H. E., Fr.	SS-1-2	Stillwater
Hall, Marcus	C. and M., Fr.	1-2	Comanche
Hall, Vance	V. A.	1-2	Bonham
Hamilton, Mary Ruth	H. E., Fr.	1-2	Afton
Hamlin, Mildred E.	C. and M., Special	1-2	Oklahoma
Hamm, Chas.	C. E., Fr.	1-2	Lindsay
Hamm, Harland	Sec.	1-2	Shawnee
Hammond, Frank	Engr., Soph.	1-2	Kremlin
Hampton, Leo	Sec.	1-2	Blackburn
Hampton, L. B.	C. and M., Fr.	-2	Prague
Hancock, Otway B.	C. and M., Fr.	1-2	Frederick
Hand, Dent N.	C. and M., Sr.	1-2	Salt Fork
Hand, Wilson D.	C. E., Fr.	1	Stillwater
Hanes, Clyde J.	C. and M., Fr.	1	Hobart
Hankins, Blake	Agri., Soph.	1-2	Tulia, Texas
Hannah, James	S. and L., Fr.	1	Mangum
Hardin, Frank C.	V. A.	1	Tecumseh
Hardy, Ernest A.	Educ., Sr.	SS-1-2	Stillwater
Harden, Marie Simmons	H. E., Sr.	SS-1-2	Stillwater
Harper, Roy E.	Agri., Sr.	SS-1	Okahoma
Harper, Wendell	S. and L., Fr.	1-2	Okahoma
Harrell, Ada J.	H. E., Soph.	1-2	Calvin
Harrell, Leona	H. E., Jr.	-2	Calvin
Harrelson, Harel E.	Trades	1-2	Clinton
Harrelson, Horace	Trades	SS-1-2	Stillwater
Harrington, John	Sec.	-2	Stillwater
Harris, Cecile	C. and M., Fr.	SS-1-2	Cushing
Harris, Edward	Engr., Fr.	1-2	Howe
Harris, H. H.	Engr., Fr.	1-2	Martha
Harris, Mildred	H. E., Fr.	1-2	Jet
Harris, Paul W.	M. E., Soph.	1-2	Chicksha
Hartman, Harry	C. and M., Fr.	1-2	Breckenridge
Hartshorne, Annie E.	Educ., Fr.	1-2	Yale
Harvey, Arthur	C. and M., Soph.	SS-1-2	Stillwater
Harvey, Ruth	Music, Sr.	SS-1-2	Stillwater
Hasbrook, Nathan	Agri., Fr.	1-2	Marshall
Hassler, F. R.	Engr., Jr.	SS-1-2	Stillwater
Hasting, Anna L.	H. E., Sr.	1-2	Perkins
Hasting, Lois Bertha	Sec.	1-2	Perkins
Hatcher, Edward A.	Sec.	1-2	Stillwater
Hatfield, Ernest	C. and M., Fr.	1-2	Stillwater
Haughey, Claude C.	Educ., Fr.	SS-1-2	Stillwater
Haughey, Mrs. C. C.	H. E., Fr.	SS-1-2	Stillwater
Hawes, Vernon B.	C. and M., Soph.	1-2	Shawnee
Hawker, Wayne	Engr., Fr.	1-2	Tulsa
Hayes, Elsie	H. E., Jr.	1-2	Hobart
Hayman, Hattie	Educ., Sr.	1-2	Grand Junction, Colo.
Hayman, LeRoy	Agri., Fr.	-2	Wyandotte
Heck, Helen	H. E., Sr.	1	Helena

Heckel, Fred Jr.	Engr., Fr.	1-2	Garber
Heed, Hobart	E. E., Fr.	1-2	Ardmore
Heffner, Ramon	Agri., Fr.	1	Chickasha
Heinz, Lewis G.	V. A.	SS-1-2	Rosston
Hellman, Victor D.	C. and M., Fr.	1	Chandler
Helm, Ewing	Sec.	1-2	Antlers
Henderson, Charlie	Sec.	1	Stillwater
Henderson, Chas.	Sec.	1	Stillwater
Henderson, Illiff	Engr., Soph.	1-2	Stillwater
Henderson, Louis	Sec.	1-2	Stillwater
Hendrickson, Asher	Engr., Sr.	1-2	Boynton
Hendrickson, Joe	V. A.	1-2	Boynton
Henn, Carl	Short Course	1	Orlando
Henry, Chas.	V. A.	SS-1	Checotah
Henson, Homer H.	Agri., Soph.	1-2	McLoud
Henson, Margaret	Educ., Soph.	SS-1-2	Shawnee
Henson, Paul R.	V. A.	1-2	McLoud
Henson, Ralph	Agri., Fr.	1-2	McLoud
Herbert, Violet	H. E., Fr.	1-2	Kaw
Hesser, Isaac T.	C. and M., Fr.	SS-1-2	Stillwater
Hetherington, C. J.	Trades	SS-1-2	Stillwater
Hetsch, Katherine	Educ., Soph.	1-2	Guthrie
Hettinger, Henry	Ch. Engr., Fr.	1-2	Stillwater
Heusel, Anola	H. E., Soph.	1-2	Stillwater
Hewitt, Harlie C.	V. A.	-2	McLoud
Heycus, Ernest	Trades	1-2	Stillwater
Heycus, Pear	Music, Special	1-2	Stillwater
Hickman, E. O.	V. A.	-2	Corsicana, Texas
Hickman, Geo. M.	C. and M., Fr.	1	Yale
Hickman, Glynn	V. A.	1-2	Hennessey
Hieronymus, Florence	Educ., Fr.	1-2	Pond Creek
Higgins, Lynn	C. and M., Fr.	1-2	Lenore
Higgins, Ralph M.	E. E., Fr.	1-2	Oklahoma
High, Leroy	Engr., Fr.	1-2	Cushing
Hildebrand, Dick	C. and M., Sr.	1-2	Ocean Port, N. J.
Hill, Chas. W.	V. A.	1-2	Humphreys
Hill, Ernest H.	C. and M., Soph.	1-2	Chickasha
Hiner, Boyd J.	V. A.	SS-1-2	Polytechnic, Texas
Hindricks, Anton	E. E., Fr.	1-2	Stillwater
Hinson, Argus E.	V. A.	1-2	Paris, Texas
Hinson, Edna	H. E., Soph.	1-2	Eldorado
Hinson, Esther	H. E., Special	-2	Paris, Texas
Hinson, Marcus W.	Engr., Jr.	1-2	Eldorado
Hinson, Maude Rinehart	H. E., Sr.	SS-1-2	Ramona
Hitt, Aline	H. E., Fr.	1-2	Yale
Hitt, Jack H.	Engr., Fr.	1-2	Yale
Hitt, Lewis	Engr., Fr.	1-2	Yale
Hobbs, Robert Earl	Engr., Fr.	1-2	Doyle
Hobein, Ray B.	Trades	SS-1-2	El Paso, Texas
Hoffsummer, Helen	H. E., Soph.	1-2	Hillsdale
Hoffsummer, Leroy H.	C. and M., Fr.	1-2	Hillsdale
Hoge, Marlin S.	Agri., Fr.	1-2	Heavener
Hoke, James	C. and M., Fr.	1-2	Stillwater
Holford, Dallas	Agri., Fr.	1	Madill
Holland, Flora	H. E., Fr.	1-2	Stilwell
Holland, John K.	Trades	1-2	Shawnee
Holliday, Gladys	Educ., Soph.	1	Crescent
Hollingshead, Estell	E. E., Sr.	1-2	Lawton
Hollingsworth, Leslie	C. and M., Fr.	1-2	Chickasha
Holman, Oscar H.	C. and M., Sr.	SS-1-2	Minco
Holmes, Carl	C. and M., Jr.	1-2	Stillwater
Holmes, Neti E.	Music, Jr.	1-2	Stillwater
Holt, Gertrude	S. and L., Soph.	1-2	Stillwater
Holter, Ethel	S. and L., Spec.	1	Okeene
Holter, Ralph E.	C. and M., Fr.	1	Okeene
Holton, Mary M.	H. Econ., Fr.	1-2	Helena
Hope, John L.	V. A.	-2	Maysville
Hopkins, Dorothy	C. and M., Soph.	1-2	Guthrie
Hopkins, Marshall L.	V. A.	SS-1-2	Marianna, Ark.
Hopkins, Omar	C. E., Soph.	1-2	Crescent
Horral, A. B.	V. A.	1-2	Enid
Hosch, Francis	Trades	1-2	Terrell, Texas
Houser, Gwindolyn	H. E., Fr.	1	Vici
Housh, Margaret	H. Econ., Soph.	1-2	Blackwell
Houston, Oscar D.	V. A.	SS-1-2	Stillwater
Howard, Lee	Trades	1	Erick
Howard, Maurice	Engr., Fr.	1-2	Headrick
Howe, Fred D.	V. A.	1-2	Forney, Texas
Howery, George W.	V. A.	SS-1-2	Stillwater
Howland, Clarence	C. and M., Fr.	1-2	Stillwater

# Register of Students

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Howland, Elma B. ....	Sec. ....	1-2	Stillwater
Hoyt, Donald F. ....	C. and M., Fr. ....	1-2	Chandler
Hubbard, Ellis H. ....	C. and M., Fr. ....	1-2	Douglas
Huckleberry, B. C. ....	Educ., Special ....	SS-1-2	Cordell
Huckstep, J. T. ....	Educ., Fr. ....	1-2	Stillwater
Hudiburg, Caziville ....	S. and L., Soph. ....	1-2	Stillwater
Hudiburg, Gladys ....	H. E., Soph. ....	1-2	Stillwater
Hudiburg, Joe A. ....	Agri., Fr. ....	1-2	Prague
Hudson, Robert ....	C. and M., Fr. ....	1	Oklahoma
Huff, Chas. H. ....	V. A. ....	-2	Morrison
Huff, Thelma ....	Music, Special ....	1-2	Dewey
Huff, Wm. H. ....	Engr., Fr. ....	1-2	Billings
Hughes, John ....	H. E., Fr. ....	1-2	Mangum
Hughes, Ruby ....	Educ., Fr. ....	1-2	Purcell
Hughes, Will ....	C. and M., Fr. ....	1-2	Ames
Hulme, Lillian L. ....	H. E., Fr. ....	1-2	Stroud
Hulse, Lant A. ....	Sec. ....	SS-1-2	Hollis
Hulse, Ollie ....	Agri., Sr. ....	SS-1-2	Hollis
Humphrey, James ....	Short Course ....	1-2	Sallisaw
Humphrey, James L. ....	C. and M., Soph. ....	1-2	Kingfisher
Hunt, Lucille ....	H. E., Fr. ....	1-2	Sharon
Hunter, Jack ....	S. and L., Fr. ....	1	Pawhuska
Hurford, John R. ....	M. E., Jr. ....	1-2	Shawnee
Hurley, Fern ....	Educ., Fr. ....	1-2	Deer Creek
Hurst, Clarabell ....	H. E., Soph. ....	1	Oklahoma
Hurst, Clyde ....	Engr., Fr. ....	1-2	Garber
Hurst, Dick ....	C. and M., Sr. ....	1	Oklahoma
Hurst, Henry ....	Sec. ....	1	Orlando
Hutchesin, Bess ....	Educ., Sr. ....	SS-1-2	Stillwater
Hutcheson, C. C. ....	E. E., Fr. ....	1-2	Eldorado
Icenhower, Emory A. ....	V. M., Fr. ....	1-2	Thomas
Ingram, Clyde ....	Agri., Sr. ....	SS-1-2	Hollis
Isenberg, Gilbert ....	Agri., Sr. ....	1-2	Stillwater
Ives, Herbert D. ....	S. and L., Sr. ....	1-2	Stillwater
Ives, J. Maxwell ....	Agri., Sr. ....	SS-1-2	Shawnee
Ivester, W. L. ....	V. A. ....	1	Sayre
Jacaris, Hadji A. ....	Agri., Special ....	SS-1-2	Jolo-Sulu, P. I.
Jackson, Earl ....	Engr., Fr. ....	1	Thomas
Jackson, Eva ....	S. and L., Jr. ....	1-2	Shawnee
Jackson, James O. ....	Short Course ....	1	Monroe
Jackson, W. L. ....	V. A. ....	1	Tulsa
Jacobs, Albert ....	Agri., Fr. ....	1-2	Stillwater
Jacob, Walter ....	Agri., Fr. ....	1	Stillwater
James, Robert Glen ....	Engr., Fr. ....	1-2	Manum
Jehlicka, Bohumil ....	Sec. ....	SS-1-2	Stillwater
Jehlicka, Ludwick ....	Engr., Jr. ....	1-2	Stillwater
Jester, Clarence ....	C. and M., Soph. ....	1-2	Snyder
Jester, Dave ....	V. A. ....	SS-1-2	Oklahoma
Jester, Louise ....	Educ., Sr. ....	SS-1-2	Stillwater
Johnson, Bruce W. ....	Sec. ....	1-2	Hastings
Johnson, Mrs. E. B. ....	H. E., Special ....	SS-1-2	Stillwater
Johnson, Edna Marie ....	Educ., Fr. ....	SS-1-2	Meridian
Johnson, H. F. ....	V. A. ....	1	Vici
Johnson, Opal ....	Educ., Fr. ....	SS-1-2	Meridian
Johnson, Opal E. ....	H. E., Jr. ....	1-2	Chandler
Johnston, W. L. ....	Engr., Fr. ....	1-2	Claremore
Jones, Benj. C. ....	V. A. ....	1-2	Dallas, Texas
Jones, Clark N. ....	Engr., Fr. ....	1-2	Duncan
Jones, James ....	C. and M., Fr. ....	1-2	Chickasha
Jones, James C. ....	Arch., Special ....	SS-1-2	Stillwater
Jones, Joe ....	V. A. ....	-2	Tuttle
Jones, Marshall ....	Sec. ....	1-2	Stillwater
Jones, Ruth ....	S. and L., Fr. ....	1-2	Stillwater
Jones, Ruth Marie ....	H. E., Fr. ....	1-2	Oklahoma
Jones, Stella ....	H. E., Sr. ....	1-2	Hobart
Jones, Vera ....	H. E., Fr. ....	1-2	Stillwater
Jones, Zerma ....	H. E., Fr. ....	1-2	Sapulpa
Jordan, Nolan ....	C. and M., Fr. ....	1-2	Vinita
Juedeman, Harold ....	Trades ....	1-2	Edna
Kahle, Frances B. ....	H. E., Soph. ....	1-2	Bartlesville
Kane, John S. ....	Short Course ....	1	Cherryvale, Kansas
Kearns, B. E. ....	Engr., Fr. ....	1-2	Billings
Keegan, Claire ....	C. and M., Fr. ....	1-2	Chandler
Keely, Arline ....	H. E., Jr. ....	1-2	Arcadia
Keely, Ruth ....	H. E., Fr. ....	1-2	Arcadia
Keen, Clifford ....	C. and M., Soph. ....	1-2	Weatherford
Keepers, Francis ....	Engr., Soph. ....	1-2	Hugo

Kieffer, Beulah	H. E., Jr.	SS-1-2	Helena
Keith, Jess R.	Engr., Fr.	1	Duncan
Kelley, Byron L. L.	C. and M., Fr.	SS-1-2	Pryor
Kelly, William	C. and M., Fr.	1-2	Yukon
Kelsey, Joseph E.	Arch., Special	1-2	Wilburton
Kennedy, Harvey M.	Trades	1-2	Chickasha
Kernodle, O. P.	Short Course	1	Devol
Kester, George D.	C. E., Soph.	1-2	Enid
Ketch, W. Virgil	Educ., Fr.	SS-1-2	Stillwater
Ketchum, J. E.	C. and M., Special	1	Grainola
Keys, Chester	C. and M., Soph.	SS-1-2	Stillwater
Kezer, Irene	S. and L., Jr.	1-2	Stillwater
Kidd, Robert E. L.	Engr., Soph.	1	Bristow
Kilpatrick, Floyd A.	Special	1-2	Ruston, La.
Kinch, Chas. W.	Sec.	1	Depew
King, Ethel	H. E., Fr.	1	Cushing
King, Ruby	H. E., Fr.	1-2	Stillwater
Kingsley, Volney	C. and M., Soph.	SS-1-2	Canton
Kinkead, Clark	Agri., Soph.	1-2	Nowata
Kinney, Roy L.	V. A.	SS-1-2	Lorena
Kinsley, Mildred	Sec.	1-2	Okmulgee
Kinslow, W. C.	Short Course	-2	Oklahoma
Kirk, Myrl S.	Agri., Fr.	1-2	Fairmont
Kirkland, Ira H.	Arch., Soph.	1-2	Muskogee
Kirk, James H.	V. A.	SS-1	Guymon
Kirkpatrick, Tom	Agri., Sr.	SS-1	Lewisville, Texas
Kitchens, Jim	V. A.	1-2	Clarita
Kite, Chas.	V. A.	SS-1-2	Sobal
Kite, Floyd E.	M. E., Fr.	1-2	Claremore
Klabzaba, Chas.	C. and M., Fr.	-2	Prague
Klepper, Wayne	C. and M., Fr.	1-2	Shawnee
Klinke, Helen	S. and L., Soph.	1	Guthrie
Knight, Ivan T.	E. E., Fr.	SS-1-2	Stillwater
Knight, J. M.	C. and M., Soph.	1-2	Stillwater
Knight, Roy C.	C. and M., Jr.	SS-1-2	Stillwater
Knowles, Roy G.	V. A.	1	Arnett
Knox, Stella	Educ., Soph.	1-2	Perry
Kolb, Daniel	V. A.	1-2	Orlando
Ko'b, Susie	Educ., Special	1-2	Orlando
Kornegay, Clarence S.	C. and M., Soph.	1-2	Vinita
Kozak, Frank	C. and M., Fr.	1-2	Prague
Kragh, Muriel	Educ., Fr.	1-2	Driftwood
Krausse, Erick	Engr., Fr.	1-2	Douglas
Kroutil, Edward	C. and M., Soph.	1-2	Prague
Kugel, Cole	C. and M., Fr.	1-2	Salt Fork
Kugel, Glen	C. and M., Jr.	1-2	Salt Fork
Kugel, Harry	C. and M., Jr.	1	Salt Fork
Kugel, Paul	V. A.	1-2	Salt Fork
Kyle, James W.	V. A.	1-2	Mead
La Grange, Esther	S. and L., Fr.	1-2	Garber
LaGrange, Lois	H. E., Fr.	1-2	Garber
Lahr, Walter	C. and M., Fr.	1-2	Waynoka
Lake, Edgar R.	Ch. E., Soph.	1-2	Stillwater
Lake, Thomas O.	Trades	1-2	Stillwater
Lambert, Omar	Sec.	SS-1-2	Stillwater
Lancaster, Mrs. Frances	H. E., Fr.	SS-1-2	Cushing
Lancaster, Grady	C. and M., Special	SS-1-2	Cushing
Landry, Ras	M. E., Jr.	-2	Beaumont, Texas
Lane, Harvi M.	Trades	1-2	Stillwater
Lane, J. Roy	C. and M., Sr.	SS-1-2	Shawnee
Langley, Katherine	H. E., Fr.	1-2	Claremore
Lanphere, W. B.	Agri., Jr.	1-2	Deer Creek
Larrew, Marvin	Engr., Fr.	1-2	Frederick
Latcher, David	C. and M., Soph.	1-2	Deer Creek
Latimer, Vera	S. and L., Jr.	1-2	Pawnee
Lauderdale, Glenn	C. and M., Fr.	SS-1-2	Stillwater
Lauderdale, Grace	H. E., Fr.	SS-1-2	Stillwater
Laurent, J. Henry	Sec.	1-2	Tipton
Laverty, Helen	C. and M., Sr.	1	Denver, Colo.
Lawler, John R.	C. and M., Spec.	SS-1-2	Holly Creek
Lawrence, Edgar R.	Agri., Sr.	SS-1-2	Stillwater
Lawrence, W. Martin	Arch., Special	1-2	Oklahoma
Lawrence, Mrs. Mary	H. E., Special	1-2	Stillwater
Leachman, Oakley	C. and M., Fr.	1-2	Woodward
Leard, Wheeler R.	C. and M., Soph.	1-2	Hugo
Lee, Thurman R.	Educ., Special	-2	Wagoner
Leeper, Milo	Trades	1-2	El Reno
Leer, Francis	S. and L., Fr.	1-2	Rocky
Leer, Laura	H. E., Jr.	1-2	Rocky

Leer, Martha	S. and L., Fr.	1-2	Rocky
Lemert, Opal	Educ., Fr.	1-2	Pawnee
Lemmon, H. D.	Agri., Jr.	SS-1-2	Minco
Lemmon, Mrs. Leota	Bus.	-2	Stillwater
Lemmon, Nettie E.	H. E., Fr.	1-2	Minco
Lemmon, Robert E.	C. and M., Soph.	1-2	Minco
Level, Bertha	H. E., Fr.	1-2	Tishomingo
Lewis, Dora	H. E., Fr.	1-2	Quanah, Texas
Lewis, Samuel Lee	Agri., Fr.	1-2	Stillwater
Lewis, Leonard T.	C. and M.	1-2	Sapulpa
Lewis, Madge	C. and M., Soph.	1-2	Chandler
Lieberman, Lewis	C. and M., Fr.	1-2	Sapulpa
Ligon, Andrew J.	Agri., Special	-2	Denton, Texas
Linch, Lois	C. and M., Fr.	1-2	Ponca City
Lindsay, Bess	Educ., Fr.	1	Okeene
Lindsay, M. L.	Short Course	1	Chickasha
Lipscomb, Joe E.	C. and M., Fr.	1-2	Chickasha
Listerman, Jesse	Sec.	SS-1-2	Coyle
Livergood, Donald	Bus.	-2	Newkirk
Logue, Dorothy	H. E., Fr.	1-2	Stillwater
Logue, Esther	H. E., Fr.	SS-1-2	Stillwater
Lonergan, John L.	Agri., Jr.	1-2	Pawnee
Long, W. H.	E. E., Jr.	1-2	Wakita
Longley, Ruth	H. E., Fr.	1-2	Pond Creek
Lookabaugh, Guy H.	C. and M., Soph.	1	Watonga
Lookabaugh, Luda	S. and L., Jr.	1-2	Stillwater
Looney, Texas	Engr., Soph.	1-2	Chickasha
Loosen, E. M.	C. and M., Soph.	1-2	Okarche
Loosen, Isabel	H. E., Sr.	SS-1-2	Okarche
Loosen, Max H.	C. and M., Fr.	1-2	Okarche
Loosen, Vilette	Sec.	1-2	Okarche
Lottridge, Beryl	C. and M., Fr.	1	Enid
Lowe, Fred D.	C. and M., Jr.	1-2	Stillwater
Lowe, J. N.	Agri., Fr.	1-2	Warren
Lowe, Norman D.	Agri., Special	-2	Greenfield
Lowrance, C. O.	Agri., Special	1	Sulphur
Lowrey, C. M.	Short Course	1	Hobart
Lowrey, L. Chester	Engr., Soph.	1-2	Elk City
Luder, Fabian N.	C. and M., Fr.	1-2	Okeene
Ludwick, Russell W.	Agri., Sr.	1-2	Okmulgee
Luman, Hezekiah	Agri., Special	SS-1-2	Erick
Lumsden, Voll	V. A.	1-2	Hobart
Lunday, Willard	Bus.	1	Cushing
Lundberg, Ralph C.	Engr., Soph.	SS-1-2	Stillwater
Luper, Arch B.	Trades	SS-1-2	Centrahoma
Luton, Alton	Engr., Fr.	1	Lindsay
Lutschg, Elmer	Sec.	1	Stillwater
Lyde, Raymond	Engr., Fr.	1	Hobart
Lyne, George P.	Agri., Special	SS-1-2	Tishomingo
Mace, Thomas P.	C. and M., Fr.	1	Jennings
Macy, Lela	V. H. E.	-2	Chandler
Madamba, George A.	Agri., Special	1-2	Ocezon, Neuva Ecija, P. I.
Maddon, Vivian Mae	S. and L., Fr.	SS-1-2	Cloud Chief
Madison, Walter F.	V. A.	SS-1	Stillwater
Mabry, James C.	V. A.	-2	Thackerville
Magill, Dwight	C. and M., Special	1	Okeene
Mahoney, Geo. F.	Sec.	1-2	Walters
Main, Francis E.	Engr., Jr.	1-2	Stillwater
Main, Lois	Music, Fr.	1-2	Stillwater
Malkus, Louis	Engr., Fr.	1-2	Shawnee
McClone, Harold L.	Engr., Soph.	1-2	Oklahoma
Mandeville, John A.	V. A.	SS-1-2	Stillwater
Maness, Velma	Educ., Fr.	1	Thackerville
Mansur, Milton	Engr., Fr.	1-2	Okemah
Manuel, Goff	C. and M., Fr.	1-2	Woodward
Markland, James D.	C. and M., Jr.	SS-1-2	Stillwater
Marmaduke, Arthur	Engr., Fr.	1	Waurika
Maroney, Mildred	C. and M., Soph.	SS-1-2	Stillwater
Marquess, John C.	Sec.	1	Stillwater
Marr, Omer H.	V. A.	1	Antlers
Marrott, Harry	Sec.	1	Stillwater
Marshall, Carl E.	C. and M., Fr.	1-2	Breckinridge
Marshall, E. W.	V. A.	SS-1-2	Winfield, Ala.
Marshall, W. Jesse	Sec.	1-2	Edmond
Martin, Emil	C. and M., Fr.	1-2	Deer Creek
Martin, Leroy	Educ., Soph.	1-2	Stillwater
Martin, Ora	Sec.	1	Luther
Mason, Harry L.	Agri., Soph.	1-2	Oklahoma
Mason, John	C. and M., Fr.	1-2	Guthrie

Massey, Floyd P.	Trades	SS-1	Granburg, Texas
Matejowsky, Emmett	Sec.	SS-1-2	Rowena, Texas
Matejowsky, R. C.	Sec.	SS-1-2	Rowena, Texas
Matkin, Geo. H.	Arch., Soph.	1-2	Stillwater
Matkin, Harold	C. and M., Soph.	1-2	Stillwater
Matthews, Roy C.	C. and M., Jr.	1-2	Mulhall
May, Geo. H.	V. A.	1-2	Anadarko
Mayfield, Erma	Educ., Fr.	SS-2	Glencoe
Mayhew, Geo. L.	Arch., Special	1	Geary
McAdams, Alma	Educ., Fr.	1	Stillwater
McAdams, T. P.	C. and M., Jr.	SS-1	Stillwater
McBrayer, Samuel L.	V. A.	1-2	Reed
McCain, Joseph C.	Agri., Special	SS-1-2	Reed
McCartney, Argie	Engr., Fr.	1-2	Drumright
McClanahan, Ruben	Sec.	1-2	Enid
McCollum, Wm. Carl	Agri., Fr.	1-2	Emerson, Ark.
McCluskey, Fred	V. A.	SS-1	Albany, Ala.
McConnell, Caroline	S. and L., Soph.	1-2	Chicago, Ill.
McConnell, Edith	H. E., Soph.	1	Chicago, Ill.
McConnell, Fred R.	V. A.	-2	Anadarko
McConnell, Maude	Educ., Fr.	1-2	Stillwater
McCool, Daisy	Music, Special	1	Cameron, Mo.
McCord, Otis L.	Agri., Special	SS-1-2	Stillwater
McCroskey, Francenah	C. and M., Sr.	1-2	Stillwater
McCollough, Doris I.	C. E., Jr.	1-2	Tulsa
McCollough, Lloyd E.	Ch. E., Sr.	1-2	Owasso
McCurry, Roy F.	V. A.	-2	Poolville, Texas
McDonald, Doris	C. and M., Fr.	1-2	Stillwater
McDonald, Leon J.	Agri., Sr.	-2	Lindsay
McDonald, T. S.	Engr., Jr.	1-2	Walters
McDowell, Betty	H. E., Fr.	1-2	Blackwell
McFall, Wm. Kelso	Sec.	1-2	Featherston
McFarland, Madge	Sec.	1	Murphy
McGuire, Walter R.	V. A.	1-2	Grimes
McKaughan, Alta	Bus.	1	Stillwater
McKay, Joe D.	V. A.	1-2	Dustin
McKee, Loren	C. and M., Soph.	1-2	Cooperton
McKee, Mary	H. E., Soph.	1-2	Meeker
McKnight, Emmett F.	Educ., Fr.	-2	Stillwater
McLaughlin, Paul	Bus.	1-2	Pawhuska
McLimans, Blanche	Sec.	1	Perry
McLimans, Thomas C.	V. A.	1-2	Perry
McMahan, Oscar	Engr., Fr.	1	Doby Springs
McMillen, John	Agri., Soph.	1	Hantley, Texas
McMinn, Leon	C. and M., Fr.	1-2	Brinkman
McMinn, Thaddies A.	C. and M., Special	SS-1-2	Jester
McMullen, Chas.	Agri., Fr.	1-2	Billings
McMurtry, Jett	Agri., Soph.	1-2	Shamrock, Texas
McMurtry, Leq	Engr., Fr.	1-2	Willow
McNees, Philip	S. and L., Fr.	-2	Ardmore
McNeff, Mrs. Alice	Sec.	1-2	Stillwater
McPherson	V. A.	SS-1-2	Afton
McQuown, Lattie	H. E., Fr.	1-2	Stillwater
McViker, LeRoy	S. and L., Fr.	1-2	Waukomis
McWhethy, Marie	S. and L., Soph.	SS-1-2	Stillwater
McWethy, Mead	Agri., Soph.	1-2	Stillwater
McWhorter, B. D.	Agri., Fr.	1-2	B'air
McWhorter, Nettie	Educ., Sr.	1-2	Sopcr
McWilliams, Margaret	Bus.	-2	Clarksville, Ark.
Meaders, Everett	Agri., Fr.	1	Holdenville
Means, Mrs. Elva	Educ., Soph	1-2	Stillwater
Means, Ethel	Educ., Jr.	1	Weatherford
Means, Olive	Music., Jr.	1-2	Weatherford
Means, Raymond E.	Engr., Sr.	1-2	Stillwater
Mehl, Marjorie	S. and L., Fr.	1-2	Oklahoma
Meigs, Wyman	V. A.	1-2	Banner
Melton, Loren D.	C. and M., Soph.	1-2	Stillwater
Melton, Mark	V. A.	1-2	Ames
Merrill, Ocean L.	H. E., Soph.	1-2	Tulsa
Merrill, Roy R.	C. and M., Sr.	1-2	Stillwater
Merritt, Hazel Dell	Educ., Sr.	1-2	Medford
Methvin, Frank B.	Bus.	SS-1-2	Anadarko
Metzler, Marie	H. E., Fr.	1-2	Lahoma
Meyer, E. L.	Short oCurse	1	Austin, Texas
Meyer, Joe E.	Engr., Soph.	SS-1-2	Prague
Middleton, Morris	Agri., Fr.	1-2	Custer
Mielitz, Gustav	Agri., Fr.	1-2	Garber
Mikles, Richard C.	Trades	SS-1-2	Little Rock, Ark.
Miles, Dorothy E.	Educ., Soph.	1-2	Enid
Miller, Lelia B.	Educ., Special	-2	Stillwater

Miller, J. L.	V. A.	SS-1-2	Cleo Springs
Miller, Nancy Rice	Educ., Soph.	1-2	Oklahoma
Miller, Richard Ray	V. A.	SS-1-2	Stillwater
Miller, Sidney	Sec.	1	Stillwater
Miller, William E.	V. A.	1-2	Naples, Texas
Mills, Frank	Trades	1	Logan
Mills, Floyd	Engr., Fr.	1-2	Stillwater
Mills, William A.	V. A.	SS-1-2	Stillwater
Minich, Leland C.	E. E., Fr.	1-2	Eldorado
Mitchell, Beuna	H. E., Fr.	1	Granite
Mitchell, Douglas	Agri., Fr.	1-2	Bokchito
Mitchell, Ethel	H. E., Jr.	1-2	Sperry
Mitchell, Pearl	H. E., Fr.	1-2	Stillwater
Mitchell, Ross	C. and M., Soph.	-2	Vinita
Mitchell, Ruby	H. E., Fr.	1-2	Stillwater
Moffatt, Zelpha	Educ., Special	SS-1	Stillwater
Molden, Garnet H.	Bus.	1-2	Stillwater
Monroe, Neola	V. H. E.	1-2	Stillwater
Montgomery, James A.	V. A.	SS-1-2	Oklahoma
Montgomery, Joe	Engr., Soph.	1-2	Sulphur
Moore, Alvin C.	Agri., Fr.	1-2	Spiro
Moore, Beulah	H. E., Fr.	1-2	Stillwater
Moore, Geo. A.	S. and L., Soph.	1-2	Pawnee
Moore, H. W.	Engr., Fr.	1-2	Pryor
Moore, Inez Wilson	H. E., Special	1	Stillwater
Moore, John E.	Engr., Jr.	1-2	Muskogee
Moore, John F.	Arch., Special	SS-1-2	Apache
Moore, Lane	Agri., Soph.	1-2	Van Buren, Ark.
Moore, Nellie D.	H. E., Sr.	1-2	Waukomis
Moore, S. Houston	Agri., Soph.	1-2	Renfrow
Moore, Mrs. Scott	Educ., Soph.	-2	Stillwater
Moore, Scott B.	Sec.	-2	Stillwater
Moore, Theodore R.	S. and L., Fr.	1-2	Waukomis
Moorman, Velea	Educ., Jr.	1-2	Stillwater
Morgan, Clyde	Agri., Fr.	1-2	Enid
Morgan, Florence	Bus.	-2	Stillwater
Morgan, Mollene	H. E., Fr.	1-2	Stillwater
Morgan, Reginald M.	Engr., Fr.	1-2	Muskogee
Morgan, Velma	Educ., Fr.	-2	Tulsa
Morgan, Willie	Trades	1	Pryor
Morris, Mrs. Ethel	H. E., Special	-2	Stillwater
Morris, R. T.	Agri., Soph.	SS-1-2	Idabel
Morris, Tom	Agri., Fr.	1-2	Holly Creek
Morrison, Edna	Sec.	1	Wetumka
Morris, Wm. O.	Engr., Fr.	1-2	Duncan
Morton, Geo.	V. A.	SS-1-2	Weatherford, Texas
Morton, John S.	V. A.	SS-1-2	Weatherford, Texas
Moser, Lena (Crosnoe)	Educ., Sr.	SS-1-2	Stillwater
Moses, Amos L.	Agri., Special	1-2	Winnewood
Moses, Andrew	C. and M., Sr.	SS-1-2	McKinney, Texas
Muriheid, James	Short Course	1	Newkirk
Murphy, Lon	C. and M., Special	1	Atoka
Muse, Mortimer W.	Sec.	-2	Oklahoma
Music, Willie T.	Agri., Fr.	SS-1	Stillwater
Muzzy, Maurice W.	Arch. Fr.	1-2	El Reno
Myers, C. C.	Sec.	SS-1-2	Stillwater
Myers, Mrs. C. C.	H. E., Fr.	SS-1-2	Stillwater
Myers, Thelma	Sec.	SS-1-2	Stillwater
Myrick, Samuel D.	V. A.	SS-1-2	Stillwater
Narmore, Fred L.	V. A.	1-2	Lebanon
Nash, Leo	E. E., Fr.	1-2	Lamar
Neaves, Merle J.	Engr., Fr.	1-2	Tryon
Neighbors, Ullis N.	V. A.	-2	Meeker
Nelson, Daniel	Sec.	1-2	Stillwater
Nelson, Eunice	Music, Fr.	1-2	Stillwater
Nelson, Ray	Agri., Fr.	1-2	Ames
Nelson, Raymond	Trades	1-2	Coalton
Nelson, Spurgeon	Arch., Fr.	1-2	Stillwater
Newcomb, Edith	Music, Fr.	1-2	Ennis, Texas
Newcomer, Forest	V. A.	1	Leedey
Newman, J. Russell	Engr., Fr.	1	Lockney, Texas
Newman, Paul	Engr., Fr.	1-2	Floydada, Texas
Newton, Chas. A.	C. and M., Fr.	1-2	Perry
Nicholson, Bonnie	Agri., Soph.	1-2	Hoffman
Noble, Bill	C. and M., Soph.	1	Oklahoma
Norman, William W.	V. A.	1	Wynnewood
Norris, Ida	H. E., Fr.	1-2	Stillwater
Nowlin, I. E.	Arch., Special	SS-1-2	Elmore City
Nowlin, Ona	Music, Special	1-2	Stillwater

Nutter, Earl	Engr., Soph.	1-2	Anadarko
Nye, George	C. E., Fr.	1-2	Okemah
Oaks, Emerson E.	Agri. Engr., Fr.	1-2	Frederick
O'Kief, Eunice	Sec.	1	B'ackburn
O'Kief, Goldie	Sec.	1	B'ackburn
Olcott, Lawrence	Engr., Fr.	1	Kingfisher
Oldman, Roy	Sec.	-2	Stillwater
Oliphant, Wheeler A.	Agri., Fr.	1-2	Chandler
Oller, M. B.	V. A.	SS-1-2	Allen
Olmstead, Claud	Arch., Fr.	SS-1	Luther
Olmstead, Ivan W.	C. and M., Spec.	SS-1-2	Vinita
Oltmanns, Anna M.	S. and L., Soph.	1-2	Gotebo
Oltmanns, Baraba	S. and L., Soph.	1-2	Gotebo
Olvey, Luther	Sec.	1	Lahoma
O'Neill, Hazel A.	Bus.	1	Stillwater
Ormsby, LeRoy E.	V. A.	SS-1-2	Stillwater
Orner, Sophia	H. E., Soph.	1-2	Stillwater
Orner, Zephyr	V. H. E.	1-2	Stillwater
Otey, Ivo T.	C. and M., Fr.	1-2	Stillwater
Outhier, L. B.	Short Course	1	Homestead
Outhier, Rolland C.	Agri., Jr.	1-2	Okeene
Overholt, Chas.	Short Course	1	Stillwater
Overstreet, Margaret	H. E., Sr.	SS-1-2	Cowlington
Overstreet, Russell	C. and M., Sr.	1	Stillwater
Overton, Paul Lee	Engr., Fr.	1	El Reno
Pace, Elbert E.	Agri., Soph.	1-2	Welch
Page, Chas. V.	C. and M., Special	SS-1-2	Douglas
Palmer, Cherry May	H. E., Soph.	SS-1-2	Collinsville
Pannell, John	Agri., Sr.	SS-1-2	Stillwater
Park, Mrs. H. C.	Sec.	SS-1	Stillwater
Parker, G. Millard	Agri., Fr.	1-2	Carmen
Parker, Harold M.	Engr., Fr.	1	Tulsa
Parker, Una	H. E., Soph.	SS-1-2	Stillwater
Parks, Allan A.	C. and M., Fr.	1	Altus
Parks, Gertrude	S. and L., Soph.	1-2	Stillwater
Parman, Vera	H. E., Sr.	SS-1-2	Stillwater
Pate, Melton	C. and M., Special	1	Durant
Patrick, Benjamin B.	V. A.	SS-1-2	Mustang
Patterson, Harlin	S. and L., Fr.	-2	Cherokee
Paul, Henry D.	Agri. Engr., Jr.	1	Cushing
Peach, Ralph	C. and M., Fr.	1-2	Clinton
Pearce, Carl J.	C. and M., Sr.	1-2	Cushing
Pearcy, Florence	H. E., Fr.	1-2	Lawton
Peck, Daye	C. and M., Fr.	1	Comanche
Pederson, Rufus J.	C. and M., Soph.	1-2	Weatherford
Peebles, Mary	Educ., Fr.	SS-1-2	Woodward
Peek, Charlotte	S. and L., Soph.	1-2	Stillwater
Peek, Dorothy	S. and L., Soph.	1-2	Stillwater
Peeler, Floyd	C. and M., Fr.	1-2	Guthrie
Pelton, Grover C.	Trades	1-2	Stillwater
Pemberton, Dwayne	S. and L., Fr.	1-2	Clinton
Pemberton, Marvin	C. and M., Soph.	1-2	Clinton
Pemberton, Wm.	Sec.	1	Bartlesville
Pennington, J. D.	Educ., Fr.	-2	May
Penny, H. G.	C. and M., Soph.	1-2	Stillwater
Penny, Murl L.	S. and L., Fr.	1-2	Stillwater
Penny, Seldon	C. and M., Fr.	1-2	Chickasha
Penquite, Robert	Agri., Sr.	1	Tulsa
Penton, LeRoy	V. A.	SS-1	Gainesville, Texas
Peppers, Autry	Bus.	1	Sayre
Percival, Chas. S.	Arch., Sr.	1-2	Stillwater
Perry, Lewis L.	Agri., Soph.	SS-1-2	Grove
Perryman, Jack	C. and M., Fr.	1-2	Eastland
Peters, Anton	Short Course	1	Maud
Peters, Chas.	S. and L., Fr.	1-2	Pawnee
Petty, Blanche	Agri., Sr.	1-2	Oklahoma
Petty, James Scott	V. A.	-2	Stillwater
Petty, Julia C.	Educ., Sr.	1-2	Oklahoma
Petty, Thos.	C. and M., Fr.	1-2	Oklahoma
Pexton, Frank S.	Engr., Fr.	-2	Guthrie
Pfeiffer, Katherine	Sec.	1	Or'ando
Pfimmer, Pearl	V. H. E.	1-2	Garber
Phelps, Calvin L.	Agri., Fr.	1-2	Lindsay
Phillips, Ernest J.	C. and M., Fr.	1-2	Watonga
Phillips, Evelyn	H. E., Fr.	1	Fairview
Phillips, Joseph F.	V. A.	1-2	Calumet
Pickard, Evelyn	H. E., Fr.	1-2	Stroud
Piepgress, Rudolph	Agri., Fr.	1	Alderson
Pierce, Raiford D.	V. A.	1-2	Dallas, Texas

# Register of Students

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Pitts, Joel G.	Engr., Soph.	1-2	Custer
Pitzer, Sydnie De	Educ., Special	SS-1.2	Stillwater
Pock, Geo. E.	Sec.	1-2	Ripley
Poindexter, Ruby	C. and M., Fr.	1-2	Dewey
Pointer, George	Sec.	SS-1	Okemah
Pointer, Virginia	Sec.	SS-1.2	Okemah
Polson, Robert D.	Engr., Soph.	1-2	Savoy, Texas
Popkess, Margaret	H. E., Fr.	1-2	Toronto, Kansas
Porter, Grace	H. E., Fr.	1-2	Custer
Porter, J. Hampton	V. A.	-2	McAlester
Poschel, Ralph J.	Trades	1-2	Pleasant Valley
Potter, Juanita	Music, Fr.	1-2	Garber
Potter, Viola	Sec.	1-2	Mulhall
Potts, Henry Clay	Agri., Sr.	SS-1.2	Headrick
Pound, Ted	C. and M., Fr.	1-2	Chickasha
Powers, Leila	Sec.	-2	Stillwater
Pratt, E. H.	Engr., Fr.	1-2	Stillwater
Pratt, Gladys	Educ., Fr.	1-2	Enid
Price, Elizabeth	Music, Soph.	1-2	Okmulgee
Price, Laura	H. E., Special	1-2	Grainola
Prince, Mabel	Bus.	SS-1.2	Stillwater
Proffitt, Chas. A.	Engr., Fr.	1	Cushing
Proffitt, Lilla Day	H. E., Fr.	1-2	Cushing
Puckett, Horace	Engr., Fr.	-2	Chickasha
Pugh, Alonza E.	C. and M., Fr.	1-2	Vinita
Pugh, Orlo	C. and M., Fr.	1-2	Ardmore
Pulliam Gordon	C. and M., Sr.	1-2	Cushing
Pullin, Benj. J.	V. A.	1	Stillwater
Rabon, Curtis	Agri., Fr	1-2	Madill
Radley, Gladys	C. and M., Fr.	-2	Pawnee
Radway, Mrs.	H. E., Special	-2	Stillwater
Rake, Dorothy	S. and L., Fr.	1	Yale
*Rasmussen, Jerd M.	Agri., Soph.	SS-1	Hayward
Rasmussen, Marea	Sec.	1.2	Hayward
Ratcliff, Ivan W.	Trades	-2	Albion
Rathburn, Ethyl	H. E., Fr.	SS-1.2	Stillwater
Rathburn, Eula	Educ., Fr.	SS-1.2	Stillwater
Ray, Alden E.	V. A.	SS-1.2	Cordell
Ray, Dorothy	S. and L., Fr.	1-2	El Reno
Ray, Louise	C. and M., Soph.	1-2	Stillwater
Ray, Thelma	Sec.	-2	Ok'ahoma
Raymond, Allan T.	Engr., Fr.	1-2	Boston, Mass.
Reaves, Lee	V. A.	1	Glencoe
Rector, N. K.	Engr., Fr.	1	Newkirk
Reed, Mrs. Effie	C. and M., Spec.	SS-1	Stillwater
Reed, G. Nathan	S. and L., Sr.	1-2	Stillwater
Reed, Otis C.	Agri., Sr.	SS-1.2	Washington
Reed, Zula Cooper	H. E., Jr.	1-2	Washington
Reichman, Curtis	C. and M., Soph.	SS-1.2	Stillwater
Reichman, Winnifred	H. E., Fr.	SS-1.2	Stillwater
Reid, F. E.	Bus.	-2	Stillwater
Reid, Lynn	C. and M., Fr.	1-2	Stillwater
Remund, Mrs. Asa	H. E., Jr.	1-2	Weatherford
Remund, G. A.	Vet. Med, Spec.	1-2	Weatherford
Remund, Me'ba	Music, Special	1-2	Weatherford
Renfrow, Henry F.	C. and M., Soph.	1-2	Durant
Renner, Carl	C. and M., Fr.	1-2	Tulsa
Rey, Walter A.	Engr., Soph.	SS-1.2	Oklahoma
Reynolds, Bruce	Agri., Soph.	1-2	Tulsa
Reynolds, Gladys	C. and M., Special	-2	Elk City
Reynolds, J. B.	Agri., Fr.	1-2	Ruston
Reynolds, J. Leonard	S. and L., Special	-2	Elk City
Rhoades, Fanny	Educ., Fr	-2	Wakita
Richards, Joe	V. A.	1	Titanic
Richards, W. S., Mrs.	Bus.	-2	Stillwater
Richardson, Florence	H. E., Jr.	SS-1.2	Stillwater
Richardson, R. E.	Agri., Fr.	1-2	Bradley
Rickstrew, Carol	Sec.	1-2	Stillwater
Ricks'rew, Leafy	Sec.	-2	Stillwater
Riddle, Ray F.	Engr., Fr.	1-2	Kaw
Rider, Alma	H. E., Fr.	1-2	Afton
Ridpath, Jack M.	V. A.	1-2	Ardmore
Riley, Ray	Engr., Soph.	1-2	Stratford
Rinearson, Glen O.	C. and M., Fr.	1-2	Hydro
Rinchart, Mabelle	H. E., Sr.	1-2	Ramona
Roach, Raymond	Engr., Fr.	1-2	Jet
Roark, Alonza	V. A.	SS-1	Stillwater
Robbins, O. R.	Trades	1-2	Ralston

\* Deceased.

Roberts, David E.	V. A.	1-2	Kusa
Roberts, Edd	Engr., Fr.	1-2	McLoud
Roberts, Minnie Lu	H. E., Soph.	SS-1-2	Stillwater
Roberts, Opal	Sec.	1-2	Kusa
Robertson, Lola	Bus.	SS -2	Stillwater
Robinson, Victor	V. A.	SS-1-2	Mena, Ark.
Robinson, Edgar C.	V. A.	SS -2	Hugo
Robison, Vallie	Educ., Jr	SS -2	Stillwater
Rockat, Jake	Trades	-2	Chandler
Roche, James M.	C. and M., Fr.	1-2	Foraker
Rogers, Taylor	Engr., Fr.	1-2	Iowa Park, Texas
Roller, L. Herbert	Agri., Fr.	1-2	Douglas
Roscum, Realy	Engr., Special	1	Calumet
Rosebush, Marion	H. E., Soph.	SS-1-2	Tecumseh
Ross, Wm.	C. and M., Fr.	1	Guthrie
Rouse, Edna	C. and M., Soph.	1-2	Coyle
Rowan, H. F.	Arch. Special	-2	San Antona, Texas
Rowe, Clyde F.	Agri., Soph.	1-2	Amber
Rowe, Emory W.	Sec.	SS-1-2	Stillwater
Rowland, W. M.	V. A.	-2	Tuttle
Rowley, Earl	Sec.	1-2	Durham
Rule, George	Sec.	1-2	Orlando
Russel, Henry	Trades	1-2	Poteau
Sablon, Ramon M.	S. and L., Fr.	SS-1-2	Agana, Guam
Sadlo, Geo. W.	C. and M., Soph.	SS-1-2	Prague
Sage, Ruby	H. E., Fr.	1	Nowata
Sale, Claude	C. E., Sr.	1-2	Stillwater
Sale, Robert B.	C. and M., Soph.	1-2	Shawnee
Sanders, Carl F.	Short Course	1	Oklahoma
Sanders, Quincy A.	Agri., Soph.	1-2	Kingfisher
Sanger, Stephen	H. E., Fr.	1-2	Drumright
Sayre, Joy	S. and L., Fr.	1-2	Pawnee
Schabel, Albert F.	C. and M., Special	1	Oklahoma
Schedler, Carl	C. and M., Fr.	-2	Stillwater
Schedler, E. W.	C. and M., Soph.	1-2	Stillwater
Scheilling, Katherine	Educ., Fr.	1-2	Blackburn
Schiefelbusch, Theo. L.	S. and L., Sr.	SS-1-2	Stillwater
Schlosser, Wilber	Agri., Soph.	1-2	Lawton
Schlatterbeck, Ted	C. and M., Fr.	1-2	Chickasha
Schmidt, J. J.	Spedial	-2	Stillwater
Schreiber, Lawrence	C. and M., Fr.	1-2	Garber
Schultz, Agnes	H. E., Fr.	SS-1-2	Frederick
Scroggins, Monroe	Engr., Fr.	1-2	Fouke, Ark.
Scott, Clifford L.	V. A.	1-2	Oklmulgee
Scott, Rolland G.	Engr., Fr.	1-2	Newkirk
Scroggs, Herald	C. and M., Fr.	1-2	Stillwater
Scroggs, Wm. A.	C. and M., Sr.	1-2	Stillwater
Secrist, LeRoy	Sec.	-2	Fairview
Seikel, Frances	H. E., Fr.	SS-1-2	McLoud
Seiler, Ernest	Arch., Fr.	1-2	Oklahoma
Sell, Blanche	Educ., Fr.	1-2	Frederick
Sellers, Roy T.	Trades	-2	Dacoma
Selman, Paul J.	Educ., Fr.	1-2	Leedey
Selph, Roland	C. and M., Fr.	1-2	Stillwater
Sexton, Wm.	C. and M., Jr.	1-2	Durant
Shanklin, Ethel	Educ., Soph.	1-2	Stillwater
Shanklin, Roscoe M.	C. and M., Sr.	1-2	Stillwater
Shannon, Cecil J.	C. and M., Soph.	1-2	Stillwater
Shannon, Edfred L.	Agri., Jr.	1-2	Durant
Sharp, Anna	Sec.	1-2	Orlando
Shaver, Jay C.	V. A.	SS-1-2	DeKalb, Texas
Shaw, Clarence	Trades	1-2	Konawa
Shaw, Marian	S. and L., Fr.	1-2	Blackwell
Shaw, Raymond	Engr., Fr.	1-2	Hillsdale
Shelby, F. L.	Agri., Fr.	1-2	Prague
Shepard, Edith	Sec.	1-2	Stillwater
Shepard, Frank	V. A.	1	Stillwater
Shepherd, Raymond	C. and M., Fr.	1-2	Enid
Sherman, Clyde	Sec.	-2	Mulhall
Sherman, Elsie	Sec.	1-2	Mulhall
Shidler, Kenneth	Engr., Fr.	1-2	Blackwell
Shields, Chas. H.	C. and M., Fr.	1-2	Calumet
Shiflett, Addie	Bus.	1-2	Marlow
Shiflett, C. B.	V. A.	1-2	Marlow
Shigley, Joe	Engr., Special	1-2	Pawnee
Shimizu, Antonio	Bus.	SS-1	Agana, Guam
Shingleton, Marie	Sec.	1	Stillwater
Shinn, Bonnie	Bus.	1-2	Apache
Shirley, Emory	Engr., Sr.	1-2	Apache

Shirley, Gladys	Music, Jr.	1-2	Stillwater
Shock, Thelma	V. H. E.	1	Shawnee
Shoop, Ernest	Sec.	-2	Perry
Shoop, Mrs. Ethel	Sec.	SS-2	Perry
Silang, Irinco L.	Educ., Fr.	1	Pila, Loguna, P. I.
Silver, Roy K.	Trades	1-2	Mustang
Simmons, Claude	C. and M., Fr.	1-2	Broken Arrow
Simpson, Dorothy	H. E., Fr.	1-2	Stillwater
Simpson, Mildred	Sec.	1-2	Stillwater
Simpson, Wm. B.	Bus.	-2	Stillwater
Sims, Leonard	C. and M., Fr.	1-2	Bristow
Sims, Ophelia	Sec.	1-2	Sulphur Rock, Ark.
Sinclair, Elonzo	V. A.	-2	Oklahoma
Singleton, Leon	C. and M., Fr.	1-2	Chickasha
Sittel, Clarence	Agri., Fr.	1-2	McAlester
Sittel, Clementine	H. E., Soph.	1	McAlester
Sittel, Virgil	E. E., Jr.	1-2	McAlester
Sitton, Theodore	C. and M., Special	1-2	Weatherford
Sitton, Marguerite H.	Educ., Special	1-2	Stillwater
Skalnick, Chas.	Sec.	1-2	Medford
Skarra, Emelia	S. and L., Special	1	Port Arthur, Ont., Canada
Skinner, Emory M.	Ch. Engr., Soph.	SS-1-2	Stillwater
Slagel, R. V.	C. and M., Fr.	1-2	Nowata
Slocum, Clarence A.	V. A.	1-2	Enid
Smaltz, LeRoy	Sec.	1	Cushing
Smart, Eva	H. E., Soph.	SS-1-2	Stillwater
Smart, Harold A.	C. E., Jr.	1	Stillwater
Smith, Anna	H. E., Fr.	1-2	Stillwater
Smith, Basil	Sec.	-2	Shamrock
Smith, Coy	E. E., Soph.	1-2	Stillwater
Smith, Ellis	Trades	1-2	Logan
Smith, Gray	V. A.	SS-1-2	Hartford, Ark.
Smith, Flossie	Special	1-2	Kingfisher
Smith, Harold D.	C. and M., Fr.	1	Oklahoma
Smith, John Allen	V. A.	SS-1	Stillwater
Smith, J. M., Jr.	C. and M., Soph.	1-2	Grandfield
Smith, Joe Selman	Trades	1-2	Stillwater
Smith, Lavera	H. E., Fr.	1-2	Smithville
Smith, Luella	H. E., Soph.	SS-1-2	Stillwater
Smith, Mary	Educ., Fr.	1-2	Enid
Smith, Mildred	H. E., Jr.	1-2	Stillwater
Smith, Norman J.	C. and M., Soph.	1-2	Skedee
Smith, Oliver P.	Engr., Fr.	1-2	Manchester
Smith, Roy F.	C. and M., Fr.	1-2	Broken Arrow
Smith, Sterling V.	Short Course	1	Boyd
Smith, Sylvester	Engr., Fr.	1-2	Kingfisher
Smith, U. J.	C. and M., Fr.	SS-1-2	Chandler
Smith, Wayne W.	Engr., Soph.	1-2	Stillwater
Smock, Anna Louise	Bus.	-2	Eufaula
Sneary, Gladys (Potts)	C. and M., Sr.	1-2	Driftwood
Snider, Beulah	C. and M., Sr.	1-2	Lindsay
Snow, Lewis L.	Engr., Fr.	1-2	Woodward
Snowden, Cleo	C. and M., Soph.	1-2	Stillwater
Snyder, Roy	Agri., Fr.	1-2	Douglas
Snyder, Siman B.	Sec.	1-2	Salt Fork
Souley, Eugene F.	Agri., Sr.	1-2	Beggs
Soule, Merle J. E.	Sec.	1-2	Beggs
Speck, John K.	Engr., Fr.	1-2	Olustee
Spence, Charley C.	V. A.	SS-1-2	Taloga
Spencer, Eunice	H. E., Fr.	SS-1-2	Stillwater
Spencer, Lilly	H. E., Sr.	1-2	Stillwater
Spilman, R. F.	Sec.	1-2	Silverton, Texas
Spring, E. E.	Sec.	1	Hugo
Spurgin, Claude	C. and M., Fr.	1	Yale
Stafford, Fred	Arch., Sr.	1-2	Pawnee
Stahmer, G. Ernest	Trades	1	Enid
Stanford, James	Sec.	1-2	McLoud
Stanford, W. E.	Agri. Engr., Soph.	SS-1-2	McLoud
Starke, Dudley	Sec.	1	Stillwater
Stark, Cretchen	C. and M., Fr.	1-2	Stillwater
Starr, Robert Chas.	Agri., Jr.	1-2	Fay
Staten, Hi	Educ., Fr.	SS-1-2	Stillwater
Stavely, Chas.	Engr., Soph.	1-2	Shawnee
Steele, John B.	V. A.	-2	Stillwater
Steele, M. G.	C. and M., Sr.	1-2	Stillwater
Stephens, Chester C.	V. A.	SS-1	Stillwater
Stephens, Henry S.	V. A.	SS-1-2	Stratford
Stevens, Ben M.	Bus.	1	Ponca City
Stevens, Bernice	Educ., Fr.	1-2	Stillwater
Stevens, Dwight E.	Engr., Fr.	1-2	Stillwater

Stevens, Gail	Bus.	1-2	Sharon
Stevens, Paul A.	C. and M., Fr.	1-2	Quapaw
Stewart, Bernice	H. E., Fr.	1-2	Oklahoma
Stewart, Mrs. Frances	Educ., Fr.	1-2	Dewey
Stewart, Geo.	V. A.	1-2	Ripley
Stilca, Merritt L.	Engr., Fr.	1-2	Denver, Colorado
Stinson, Kathryn	H. E., Soph.	1-2	Holly, Colorado
Stinson, Myrtle	H. E., Soph.	1-2	Holly, Colorado
Stipe, Oran	Trades	1-2	Alderson
Stockton, Harold M.	Engr., Soph.	1-2	Ponca City
Stokes, Alvin C.	V. A.	SS-1-2	Duncan
Stokes, Eva	H. E., Soph.	SS-1-2	Stillwater
Stokesberry, Ray	Engr., Fr.	1-	Oklahoma
Stone, Marie	H. E., Sr.	1-2	Clinton
Stormont, Riley	Engr., Fr.	1-2	Wakita
Story, Isabelle	Special	1-2	Columbus, Texas
Stout, Alice	Sec.	SS-1-2	Stillwater
Stout, Orval	Engr., Fr.	1-2	Stillwater
Stout, W. M.	C. and M., Fr.	1-2	Stillwater
Strange, Vernon	C. and M., Fr.	1-2	Hugo
Strickland, Stella	H. E., Soph.	SS-1-2	Hollis
Stringer, Thos. O.	Agri., Fr.	1-2	Hobart
Strozier, C. A.	Engr., Jr.	1-2	Red Oak
Sturgis, A. C.	Ch. Engr., Sr.	1-2	Guthrie
Sturgis, Nelson H.	S. and L., Sr.	SS-1-2	Guthrie
Sublet, Taylor	C. and M., Fr.	-2	Oklahoma
Suesz, Howard	Sec.	1-	Anthony
Sullivan, Doyle	C. and M., Soph.	1-2	Oklmulgee
Suman, Susie	Music, Special	1-2	Stillwater
Swain, E. F.	Agri., Special	-2	Stillwater
Swal'ey, Mildred	C. and M., Fr.	-2	Pawnee
Swank, Mrs. Lea	Educ., Special	1-	Stillwater
Swanson, Howard T.	Engr., Fr.	1-2	Woodward
Swanson, Ruth	Agri., Soph.	1-2	McAlester
Swart, Alice	V. H. E.	1-2	Stillwater
Swim, Elmer	Engr., Soph.	1-2	Stillwater
Swing, E. Q.	Sec.	1-2	Elk City
Swink, Randall H.	Agri., Fr.	1-2	Valliant
Tabor, Paul S.	Educ., Soph.	-2	Stillwater
Talbutt, Robert B.	V. A.	1-2	Pawhuska
Talley, B. B.	Engr., Soph.	1-2	Enid
Talley, Ted R.	Agri., Soph.	1-2	Mangum
Tatum, Hilda	H. E., Fr.	SS-1-2	Stillwater
Tatum, Harry A.	C. and M., Jr.	SS-1-2	Stillwater
Tatum, Mary C.	S. and L., Jr.	1-2	Stillwater
Taylor, Alma	H. E., Soph.	SS-1-2	Stillwater
Taylor, Chas. Ray	Engr., Jr.	1-2	Waurika
Taylor, Clarence P.	Agri., Sr.	SS-1-2	Stillwater
Taylor, Frank P.	V. A.	SS-1-2	Vinita
Taylor, Fred L.	C. and M., Jr.	1-2	Chandler
Taylor, Jester B.	Agri., Fr.	1-2	Blevins, Ark.
Taylor, Mary Alice	S. and L., Soph.	1-2	Stillwater
Taylor, Ross	Agri., Special	SS-1-2	Stillwater
Taylor, Wilfred	Agri., Fr.	1-2	Choctaw
Taylor, J. Will	C. and M., Soph.	1-2	Durham
Teater, W. G.	V. A.	SS-1-2	Childress, Texas
Tennyson, Esther	Sec.	1-2	Foyil
Thayer, Chas.	Agri., Fr.	1-2	Choctaw
Thomas, Archie	Sec.	1-2	Stillwater
Thomas, C. B.	Engr., Fr.	1-2	Stillwater
Thomas, Edna	H. E., Fr.	SS-1-2	Stillwater
Thomas, Everet	C. and M., Fr.	1-2	Hailcyville
Thomas, Joel	Educ., Fr.	1-2	Carter
Thomas, Leo	C. and M., Fr.	1-2	Vinita
Thomason, Farrel	Engr., Fr.	1-	Drumright
Thompson, David	C. and M., Fr.	1-2	Stillwater
Thompson, Ona H.	V. A.	SS-1-	Hollis
Thompson, Seth	Engr., Special	1-2	Coyte
Thompson, Theodore R.	Engr., Fr.	1-2	Vinita
Thornton, Annie Garner	Educ., Soph.	SS-1-2	Stillwater
Thurman, Ernestine	H. E., Fr.	1-2	Enid
Tice, Murriel	H. E., Soph.	SS-1-2	Stillwater
Tice, Troy	Sec.	1-2	Stillwater
Todd, Francis C.	Engr., Fr.	1-2	Cloud Chief
Toler, Bill	C. and M., Soph.	-2	Jennings
Toler, George	Engr., Jr.	1-2	Pawnee
Tolleson, J. W.	Sec.	SS-2	Stillwater
Tolleson, Ruth	Sec.	SS-2	Stillwater
Tompkins, Clara	Sec.	1-2	Stillwater

# Register of Students

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Tompkins, Floyd	C. and M., Fr.	1-2	Stillwater
Tompkins, Lon	Trades	1-2	Vinita
Townsdin, Gladys	Sec.	1-2	Mehan
Townsdin, Milfred	Sec.	1-2	Mehan
Trautmann, Bertha	Sec.	SS-2	Still water
Traver, Mrs. Alice B.	Educ., Sr.	1-2	Still water
Trefren, Doyle	Agri., Fr.	1	Thomas
Trefren, Louise	H. E., Sr.	1-2	Thomas
Trekell, Bess	S. and L., Soph.	1-2	Tishomingo
Triplett, W. G.	Agri., Soph	1-2	Claremore
Traugh, Kenneth S.	Sec.	1-2	Pawhuska
Tucker, Marion	V. A.	-2	Stillwater
Turner, Leo C.	C. and M., Fr.	1-2	Sayre
Twidwell, Ralph	Engr., Fr.	1-2	Tulsa
*Tyler, Adelaide	Special	-2	Stillwater
Underwood, Robert	C. and M., Fr.	1-2	Mt. View
Upchurch, Ernest L.	V. A.	1-1	Lenora
Updyke, Crusen	C. and M., Fr.	1-2	Woodward
Upp, Chas. W.	Agri., Sr.	SS-1-2	Chelsea
Van Buskirk, H. M.	S. and L., Fr.	1-2	Enid
Vandenburgh, Vera	H. E., Fr.	1-2	Oklahoma
Van Natta, Maxine	H. E., Fr.	1-2	Stillwater
Van Valkenburgh, Glennwood	S. and L., Fr.	1-2	Deer Creek
Van Zandt, Fred	V. A.	SS-1-	Stillwater
Varnum, Robert D.	Agri., Sr.	1-2	Seminole
Vaughan, Velma	Music, Fr.	1-2	Stillwater
Vermillion, Carrie	H. E., Sr.	1-2	Perry
Vincent, Robert	Agri., Fr.	1-2	Still water
Von Hagen, Verda	S. and L., Sr.	1-2	Nor on, Kansas
Voyles, Claud	C. and M., Fr.	SS-1-2	Stillwater
Wade, Arthur H.	V. A.	SS-1-2	Blevins, Ark.
Wade, Mrs. A. H.	H. E., Special	-2	Stillwater
Wagoner, Leola	Sec.	1-2	Orlando
Wahl, Vernon C.	C. and M., Fr.	1-2	Fairview
Waldrop, Earl H.	C. and M., Fr.	1-2	Shawnee
Waldrop, Fred	Engr., Fr.	1-2	Shawnee
Waldrop, O. M.	Sec.	1-2	Carter
Wasrop, Vernon	Engr., Fr.	1-2	Shawnee
Walker, Allen	C. E., Soph	1-2	Ryan
Walker, DuBois	Bus.	-2	Hercford, Texas
Walker, Marvin C.	C. and M., Fr.	1	Oklahoma
Walker, Newton	S. and L., Fr.	1-2	Ryan
Walker, Richard	C. and M., Fr.	1-2	Okarche
Walker, Thomas B.	Agri., Fr.	1-2	Emerson, Ark.
Wall, Robert N.	Agri., Jr.	1-2	Perkins
Wallace, J. A.	C. and M., Sr.	1-2	Leedey
Walsh, Claude L.	C. and M., Fr.	1-2	Los Angeles, Calif.
Walsh, Ra'ph	Engr., Special	-2	Muskogee
Walters, Paul J.	C. and M., Soph.	1-2	Tulsa
Walter, Roy D.	C. and M., Special	1-2	Elk City
Walter, Mrs. Ruby	H. E., Fr.	1-2	Elk City
Wamsley, Edw.	C. and M., Fr.	1-	Anadarko
Ward, Elvin B.	Sec.	-2	Stillwater
Ward, Ida	H. E., Special	1-2	Stillwater
Ward, J. B.	Short Course	1	Enid
Ward, Wm.	C. and M., Fr.	1-2	Muskogee
Warnock, Frank	V. A.	-2	Sarotogo, Wyo.
Warram, Heber	C. and M., Fr.	1-2	Vian
Washburn, Marvin Lee	C. and M., Fr.	-2	Chickasha
Watson, Eleanor	H. E., Special	-2	Eldorado, Kansas
Watson, Georgia	S. and L., Soph.	1-2	Eldorado, Ark.
Watson, Glenn	Agri., Special	1-2	Still water
Watson, Nellie	H. E., Soph.	1-2	Chandler
Watterson, Ada V.	V. A.	SS-1-2	Mead
Wear, Mae	Educ., Special	1	Yarnaby
Weatherford, Curtis	Educ., Fr.	SS-1-2	Monroe
Weaver, Anabel	S. and L., Fr.	1-2	Drumright
Weaver, Eldridge	Engr., Fr.	1-2	Drumright
Weaver, Marjorie	H. E., Fr.	1-2	Custer City
Weaver, Walter	C. and M., Jr.	1-2	Stillwater
Weaver, W. M.	Short Course	1	Enid
Welch, Elda	H. E., Fr.	1-2	Helena
Welch, John P.	V. A.	SS-1-2	Stillwater
Wells, Gray C.	E. E., Sr.	1-2	Kingston
Wells, Everett A.	Fr.	1-2	Stillwater
Wells, John	V. A.	SS-1-2	Antlers

\*Deceased.

Wells, John	V. A.	-2	Stillwater
Wells, Lloyd K.	C. E., Soph.	1-2	Tulsa
Wells, Luther A.	C. and M., Fr.	1-2	Crescent
Wells, Wilbur H.	C. and M., Fr.	1-2	Jet
West, C. George	Educ., Fr.	1-2	Chickasha
West, J. C.	Engr., Fr.	SS-1-2	Stillwater
West, Mildred	Sec.	1-2	Stillwater
Whaley, Ethel Munson	H. E., Fr.	1-2	Stillwater
Whaley, Twitty	Engr., Soph.	SS-1-2	Stillwater
Wharton, Lola Carpenter	Sec.	SS-1-	Stillwater
Wheat, Harold	V. A.	1-2	Fair Valley
Wheeler, Ray	Trades	1-2	Kaw City
Wherry, Roy	V. A.	-2	Geary
Whistler, J. M.	Engr., Fr.	SS-1-2	Stillwater
Whisler, Lois	H. E., Fr.	1-2	Watonga
Whitaker, Florence	S. and L., Sr.	1-2	Stillwater
Whitaker, Helen	H. E., Jr.	1-	Stillwater
White, Dean Edwin	Agri., Fr.	1-	Stillwell
White, Glenn	Agri., Fr.	1-	Chickasha
White, Gordon	C. and M., Fr.	1-2	Clinton
White, Marjorie	Educ., Soph.	1-2	Sulphur
White, Marvin L.	V. A.	SS-1-2	Geary
White, O. O.	Agri., Soph.	1-2	Stillwell
White, Pat F.	C. and M., Soph.	1-2	Chickasha
White, Wallace	Sec.	1-2	Anadarko
Whitehorn, Charley	V. A.	1-2	Wagoner
Whitehurst, Edith	H. E., Soph.	1-2	Oklahoma
Whitehurst, Gordon	C. and M., Fr.	1-2	Oklahoma
Whitling, Helen	Music, Fr.	1-2	Oklmulgee
Wickham, Edythe Pearl	H. E., Fr.	1-2	Stroud
Wickoff, Fred	Trades	SS-1-2	Stillwater
Wiedey, Donovan	C. and M., Fr.	1-2	Okarche
Wilcox, P. L.	Short Course	1	Foss
Wiley, Frank	Agri., Soph.	SS-1-2	Stillwater
Wilkinson, Joseph T.	V. A.	1	Honey Grove, Texas
Willham, Oliver S.	Agri., Jr.	1-2	Randlett
William, Time	H. E., Sr.	SS-1-2	Randlett
Williams, Howard T.	Agri., Sr.	1-2	Keota
Williams, Howard, Mrs.	Educ., Special	-2	Enid
Williams, James L.	C. and M., Fr.	1-2	Altus
Williams, Lae	H. E., Fr.	1-2	Woodward
Williams, Paul	C. and M., Sr.	SS-1-2	Stillwater
Williams, Preston	Engr., Fr.	1-2	Stillwater
Williams, William	Engr., Soph.	1-	Marshall
Willman, Gus W.	Bus.	1-2	Stillwater
Willman, Joseph	V. A.	SS-1-2	Stillwater
Wilson, Douglas D.	Engr., Fr.	1-2	Sapulpa
Wilson, Faye	H. E., Soph.	SS-1-2	Tulsa
Wilson, Gordon	Sec.	SS-2	Stillwater
Wilson, James Virgil	Engr., Soph.	1-	Ripley
Wilson, James Stanley	Agri., Special	1-	Ft. Towson
Wilson, Mrs. Mary R.	H. E., Special	1-2	Stillwater
Wilson, P. H.	Agri., Soph.	1-2	Spencer
Wilson, R. E.	C. and M., Soph.	1-	St. Joseph, Mo.
Wilson, Robert W.	Special	1	Wilburton
Wimpey, Ernest	C. and M., Soph.	1-2	Fairview
Winsett, Donald L.	Ch. Engr., Soph.	1-2	Higgins, Texas
Witherspoon, Clyde I.	V. A.	SS-1-2	Ravenne, Texas
Witt, C. A.	Engr., Soph.	SS-1-2	Guthrie
Witt, Henry V.	Agri., Soph.	SS-1-2	Lindsay
Wolverton, Addie	H. E., Jr.	-2	Wapanucka
Woods, Glenn A.	C. and M., Fr.	-2	El Reno
Wood, Ina	H. E., Soph.	SS-1-2	Stillwater
Wood, Naomi	Educ., Fr.	1-	Bushyhead
Wood, Paul H.	E. E., Sr.	1-2	Lahoma
Woodman, E. E.	V. A.	SS-1-2	Gou'd
Woodring, Clarissa	C. and M., Sr.	1-2	Stillwater
Woodring, Harry C.	E. E., Soph.	1-2	Stillwater
Woodring, I. A.	Engr., Fr.	1-2	Enid
Woodruff, Elmer	V. A.	-2	Stillwater
Woodworth, Alex	S. and L., Jr.	1-2	Minco
Woodyard, Darrel A.	C. and M., Fr.	1-2	Pawnee
Woolam, Marvin	Educ., Fr.	SS-1-2	Glencoe
Woolard, Chas. I.	C. and M., Jr.	1-2	Stillwater
Wooth, Owen Z.	Agri., Soph.	1-2	Fletcher
Wright, Florence	H. E., Fr.	1-2	Stillwater
Wright, Harry A.	C. and M., Fr.	SS-1-	Stillwater
Wright, Hazel	H. E., Soph.	1-2	Perry
Wright, H. A.	Agri., Soph.	1-2	Baird
Wright, Joe Wheeler	Sec.	1-2	Sallisaw

Wrigley, Chilton	Engr., Fr.	1-2	Frederick
Wyant, Edith	H. E., Jr.	1-2	Orlando
Wyatt, Wm. B.	Agri., Sr.	SS-1-2	Perry
Wycoff, Eleanore	H. E., Sr.	1-2	Manchester
Wynn, Emer	Agri., Fr.	1-2	Watonga
Wysong, Beulah	Music, Fr.	1-2	Stillwater
Yost, Paul A.	V. A.	1-2	Miami
Young, A. J., Jr.	C. and M., Fr.	1-	Oilton
Young, Gladys	H. E., Fr.	1-2	Stillwater
Young, G. U.	Agri., Jr.	1-2	Ada
Young, John C.	Agri., Fr.	1-2	Stillwater
Young, L. C.	S. and L., Fr.	-2	Cushing
Young, Nolan	Agri., Fr.	1-2	Ada
Young, Raymond	C. and M., Fr.	1-2	Stillwater
Zahler, Imogene	Educ., Fr.	1-2	Shawnee
Zeas, Chas. R.	Agri., Jr.	-2	Stillwater
Zeman, John K.	C. and M., Sr.	1.	Medford
Zink, David D.	Engr., Fr.	1-2	Muskogee

## SUMMER SESSION STUDENTS

Adair, Isaac, Idabel	Allison, Fern, Stillwater	Atkinson, Florence, Stillwater
Aikins, Nellie, Stillwater	Anderson, Anna, Jennings	Atkinson, Lillian, Stillwater
Albert, Dale, Stillwater	Anderson, Lee K., Wichita Falls, Texas.	Atwood, Leta, Stillwater
Aldridge, Clarice Mae, Manchester	Anthony, May, Stillwater	Avara, James V., Stillwater
Allen, Sylvia, Sallisaw	Ash, Dorothy, Cleora	
Backhaus, Louise M., Guthrie	Beshears, Delcie, Pawnee	Brandon, Mabel, Coyle
Bagby, Carolyn, Stillwater	Bishop, Mrs. W. H., Stillwater	Brasswell, P. H., Jennings
Bagwell, A. A., Springer	Black, Lizabel, Milwaukee, Wis.	Breinholz, Gladys, Billings
Bagwell, Dorothy, Springer	Black, Mary Ann, Milwaukee, Wis.	Breinholz, Maren, Billings
Baird, Claud, Stillwater	Blackburn, J. C., Shawnee	Brewer, Wayne, Stillwater
Baird, Ray, Guthrie	Blackburn, J. T., Welch	Briggs, A. B., Stillwater
Baker, Carl, Pawnee	Blair, Maggie, Cushing	Briggs, Glen, Stillwater
Baker, Mrs. W. M., Prue	Bledsoe, Laura, Cushing	Briggs, G. A., Stillwater
Baker, W. M., Prue	Bledsoe, Ulala, Cushing	Briggs, Lena, Stillwater
Barnett, Henry R., Stig'er	Blouin, Ruth, Arch Creek, Fla.	Bruer, Maye, Chickasha
Barron, Margaret, Stillwater	Bolin, Mrs. E. L., Stillwater	Bryan, Kenneth V., Stillwater
Bassler, Emma, Stillwater	Bolles, Esther, Perkins	Budzene, Ella, Orlando
Bateman, Essie, Drumright	Bolles, Vernon, Perkins	Burke, Creta, Perry
Beeason, Evelyn, Stillwater	Boucher, Hazel, Bristow	Burke, Mrs. Lula, Perry
Belford, Marguerite, Chandler	Bowline, A. L., Delhi, Colo.	Burris, Freda, Pawnee
Benefield, Maud, Fargo	Brack, Winnie., Anadarko	Burton, Bertha, Stillwater
Benton, Alfred, Stillwater	Bradley, Chas. A., Glencoe	Burris, Rhoda, Pawnee
Berryman, Hazel, Stillwater		Buzzard, Agnes, Stillwater
Caldwell, Ian, Stillwater	Clark, Gladys, Pawnee	Cowan, J. P., Stillwater
Caldwell, Laverne, Stillwater	Clark, Jessie, Prague	Crabtree, Dorothy, Stillwater
Caldwell, Ruby, Pawnee	Clark, Mary, Mangum	Crabtree, Roy, Waukomis
Callarman, Eva, Stillwater	Collins, Mabel, Stillwater	Craven, Ona Mae, Stillwater
Carlton, O. F., McCloud	Colvin, Jewell, Stillwater	Crook, Minnie, Stillwater
Carter, Zaida, Stillwater	Cooper, Le'a, Stillwater	Crusnoe, S. M., Hollis
Cash, Warren, Stillwater	Coonrod, Cornelia, Mannford	Cruzan, Ethel, Stillwater
Chapman, Helen, Stillwater	Coonrod, Loletta Lorene, Mannford	Cummins, Wilma, Glencoe
Chewning, W. P., Stig'er	Copp, William, Athion	Cutright, Ancl, Stillwater
Clark, Ester Soto, Stillwater		Cutright, Thelma, Stillwater
Dale, Florence, Stillwater	Dillingham, Esther-Moore, Stillwater	Doty, Lola, Stillwater
DeBois, Pauline, Stillwater	Dobson, Leona, Stillwater	Dowell, C. T., Stillwater
DeBois, Virginia, (Wilson) Stillwater.	Doolin, Bernice, Oilton	Dryk, Tom K., Cleburne, Texas
DeMarsh, Harold, Stillwater	Driggs, Kyle, Stillwater	Dudley, Bessie, Blackburn
DeWitt, Grace, Glencoe	Dryden, Mollie, Stillwater	
Easterday, Hazel, Blackwell	Eikenbary, G. C., Terrolton	Eppler, Forest, Stillwater
Eastwood, Julia, Guthrie	Emert, Elmira, Stillwater	Eskeu, Lida Mae, Collinsville
Echols, Jessie, Mangum	Emert, Meary, Stillwater	
Fairchild, Helen, Morrison	Flowers, Florence (Rusher) Stillwater	Foster, Anna M., Stillwater
Fel'ows, Barrett, Stillwater	Fox, Otis, Fresno, Calif.	French, Laura, Burlington
Ferguson, Rose, Glencoe	Franklin, E. M., Stillwater	Friedemann, Marie, Stillwater
Files, Agnes, Rals'on	Fredikind, Hulds, Perry	Freeman, Zonie B., Enid
Finley, Faye, Collinsville	Freeman, Hartley, Stillwater	Fry, R. B., Stillwater
Finnell, Martha, Orlando	Foliart, C. R., McAlester	Fugate, Roy, Blackburn
Fiscus, Elenor, Stillwater	Forrester, W. B., Stuart	
Floyd, Mary, Bentonville, Ark.		
Gaddy, Helen, Broken Arrow	Garrett, Lillian, McKinzie, Tenn	Gilbert, Bina Mae, Salt Fork
Gaddy, Sue, Broken Arrow	Garrett, Rada Sue, Mangum	Gil'eland, Zealan, Seminole
Gaines, Onal, Stillwater	Garrison, Mrs. Effie, McCloud	Gilmer, James, Stillwater
Gardner, C. G., Stroud	Gertsen, Pearl, Stroud	Glass, Floy, McClain, Texas

- Glazner, Lucille, Eufaula  
Goodholm, Inez, Stillwater  
Goodman, James L., Dallas,  
Texas  
Grady, Walter, Stillwater
- Haag, Kathryn, Stillwater  
Haak, Karl W., Texarkana, Ark.  
Hail, Sinna, Sallisaw  
Hainey, Esta, Stillwater  
Hampton, Pearl, Blocker  
Haney, Irene, Slick  
Hall, Robert, Stillwater  
Harris, Blanche, Glencoe  
Harris, Laura, Glencoe  
Harris, Nora, Glencoe  
Harrie, Wm. M., Tishomingo  
Harrison, Omiel J., Indianahoma  
Hayes, T. E., Stillwater  
Haymes, Mrs. W. R., Garber
- Ikard, Catherine, Chickasha
- Jacobs, Joan, Cleora  
Jameson, Agnes, Burbank  
Jenkins, Agnes, Stillwater  
Jeness, Edward, Bighart  
Johnson, Ruby, Meridian
- Keen, Paul, Quay  
Keeton, Mrs. Florence, Blackburn  
Kecton, Ollie, Blackburn  
Kellner, B. A., Pawnee  
Kellner, Ruth G., Pawnee  
Kellner, Leonard, Vici  
Kelly, Mabel, Pryor
- Labenske, Iola, Fairfax  
Lackey, Zea, Wanette  
Lafon, Finis, Orlando  
Land, Mont, Hewins, Kansas  
Lauderdale, Gladys, Avery  
Leach, Netrola, Orlando
- Madison, Mrs. Gladys, Stillwater  
Malory, Esther, Pawnee  
Maness, Mrs. T. H., Stillwater  
Markland, Margaret, Stillwater  
Markland, Thelma, Stillwater  
Markwell, Ethel, Stillwater  
Markwell, Rachael, Stillwater  
Marquess, Verna Steele, White-  
eagle  
Martin, Clara, Stillwater  
Mathis, Aimee White, Stillwater  
Mauch, Clara, Chandler  
McCarrell, Mrs. Ed, Stillwater  
McCarrell, Marie Clare, Still-  
water  
McCullom, Mrs. J. W., Jericoe  
Mo.
- Nelson I. A., Stillwater  
Nelson, I. H., Stillwater  
Neuenschwander, Irvin, Meno
- Oakson, Alice, Collinsville
- Page, Chester, Soper  
Park, H. C., Stillwater  
Parker, Myree, Glencoe  
Parker, Grace, Glencoe  
Parrott, Ethel, Wellston  
Parvin, Gertrude, Jennings  
Patton, Ruth, Stillwater  
Payton, Blanche, Tryon  
Pearson, Merl, Stillwater
- Radnich, Stephens, Stillwater  
Rambo, Fred, Pawnee  
Real, Agnes, Stillwater  
Reece, Robert, Stillwater
- Graves, Mary, Stillwater  
Graves, Mildred, Stillwater  
Gray, Alonzo A., Ralston  
Green, Mrs. Eva, Agra  
Green, George, Bethel
- Haymes, W. R., Garber  
Hemphill, John, Richmond, Ark.  
Henderson, Ora, Stillwater  
Henderson, Rosa, Harrah  
Hendrickson, Margaret Patrick,  
Boynton  
Hess, Nona, Stillwater  
Hesser, John R., Glencoe  
Hil, Erskine, Durant  
Hill, E. Vale, Effa, Ark.  
Hilton, Chas. B., Seiling  
Hinkle, Bess, Stillwater  
Holt, E. W., Soper  
Hopkins, Famos, Blackmore
- Ives, Lucile Morrison, Stillwater
- Johnson, Mrs. Grade, Quay  
Johnson, Clessa, Pawnee  
Johnson, Helen, Stillwater  
Jones, Floyd, Tryon  
Jones, Nettie, Stillwater
- Kennedy, Mabel, Morrison  
Kennemer, Essie, Glencoe  
Kennemer, Grace, Glencoe  
Ketch, Aurvil, Stillwater  
Kibler, Mrs. J. B., Stillwater  
Kilpatrick, Pearl, Hunter  
King, She'ly, Stillwater  
Kliesen, Bertha, Stillwater
- Leech, Nitolia, Orlando  
Lemert, Louis, Pawnee  
Lile, Ivo Vernon, Stillwater  
Lingenfelter, Emma, Stillwater  
Lively, Isoh, Sand Springs  
Livesay, Virginia, Chickasha
- McCullom, J. W., Welch  
McCord, Emily, Stillwater  
McCord, Glenn A., Cherokee  
McCord, Edna, Stillwater  
McCullough, Ralston  
McGehee, Elva, Red Rock  
McGehee, Marguerite, Red Rock  
McDowell, H. K., Loyal  
McQueen, Reba, Cushing  
McWethy, Faye, Stillwater  
Merritt, Donald M., Stillwater  
Miles, W. H., Coalgate  
Millsap, Harley, Bromide  
Milstead, Avery., Stillwater  
Ming, Geneva, Dewar  
Moberly, Beatrice, Stillwater  
Moffatt, Hal, Stillwater
- Newland, Nora, Glencoe  
Nichols, Jewell, Stillwater  
Nelson, George, Granite
- O'Kelley, Clara, Pawnee
- Peery, Harold, Stillwater  
Perry, Pansey, Stillwater  
Penturf, Clarence D., Bluejack-  
et  
Petree, Elmer, Fairfax  
Plum, Pearl, Prague  
Plumlie, Elsie, Pawnee  
Pummer, Eilene, Sand Springs  
Potts, Mabel, Hendrick
- Reynard, Goldie, Valley  
Richards, Amyle, Stillwater  
Richards, Carmilita, Stillwater  
Rhodes, Phil, Fairfax
- Griesel, Ethel, Pawnee  
Grimes, Lucille, Walters  
Grindstaff, Pearl, Glencoe  
Grow, Russell, Loop City, Neb.  
Gudgel, Mrs. Laura, Stillwater
- Hornberger, Bertha, Morrison  
Horton, D. B., Glencoe  
Houston, Blanche, Goodnight  
Howard, Marion, Wewoka  
Howell, Myrtle, Stillwater  
Hrdy, Olive, Prague  
Hudson, B. II., Clarita  
Hudson, Lulu, Clarita  
Hudson, S. B., Clarita  
Hughes, Mildred, Perry  
Hughes, Reola, Ames  
Hull, E. R., Cleveland  
Hutton, Margaret, Dewar
- Ivy, Ethel, Stillwater
- Jones, Beatrice, Cushing  
Jones, Charlotte, Stillwater  
Jones, Onnie, Stillwater  
Jones, Winnie, Stillwater  
Juenger, Virginia, Stillwater
- Knight, E. R., Stillwater  
Knight, Nellie, Stillwater  
Knisely, Nita, Stillwater  
Kreider, Ruth, Afton  
Knox, Ruby, Guthrie  
Krauss, Norma, Pawnee
- Lomis, A. H., Lahoma  
Looper, Daisy, Blackburn  
Loret, Mary, Stillwater  
Lowrance, M. L., Perkins  
Lunday, Gladis, Ketchum
- Moore, Giulia, Blackwell  
Morgan, Elsie, Cushing  
Morgan, Roy C., Stillwater  
Morris, Florence, Meno  
Morris, Mabel, Meno  
Mosley, Josie, Stillwater  
Moss'ey, Flora, Stillwater  
Munday, Lena, Ripley  
Murphy, H. F., Stillwater  
Murray, J. H., Prague  
Murray, Mammie, Stillwater  
Murray, Viola, Drummond  
Murphy, Elva, Orlando  
Myers, Ethel, Bartlesville  
Myers, Sam, Stillwater  
Myrick, Vera, Perkins
- Newberry, Robert. L. Wellston  
Newton, Roy C., Stillwater
- Outhier, Marie, Okeene
- Powell, Vivian, Stillwater  
Prince, Lena, Stillwater  
Pruett, Earl, Reed  
Pruett, Haskell, Reed  
Pugh, Arla, Lahoma  
Pyburn, J. Wesley, Hobart  
Putnam, Howard E., Whiting,  
Ind.
- Richards, Evelyn, Stillwater  
Ricker, Velma, Stillwater  
Rios, Jose, Agana, Guam  
Ritchey, Letha, Stillwater

Rogers, Anna, Glencoe	Rollins, Geo. C., Greenville, Tenn.	Roysdon, Vera, Stillwater
Roff, Alta, Tryon	Rosario, Juan, Agana, Guam	Rusher, H. G. Yale
Roehr, Lyda, Oklahoma		
Sanborn, Mrs. C. E., Stillwater	Shaw, Clarence C., Wewoka	Squire, Leona, Grimes
Sanford, John T., Pawnee	Shiflett, H. D., Stillwater	Stallings, Harry, Woodward
Sanquin, Chas., Hugo	Shingleton, Marie, Stillwater	Standley, Vema, Stillwater
Sarver, Mariam, Lamont	Shipley, Maude, Stillwater	Stanfill, Maude, Jennings
Savage, Edna, Hollis	Shipman, O. E., Stillwater	Stanbury, Anna, Stillwater
Savage, Eunice, Hollis	Simmons, Mrs. C. E., Stillwater	Stark, Ruth, Stillwater
Schacher, Sadie, Stillwater	Sloan, Fay, Stillwater	Staten, Mrs. Anna, Stillwater
Schooler, Bessie, Stillwater	Smart, Evelyn, Stillwater	Stewart, Ennis, Stillwater
Schooler, Josie, Stillwater	Smith, Aden W., Skedee	Stockton, Rena, Stillwater
Schooler, Rachel B., Stillwater	Smith, Nelie, Vici	Stout, Ruth, Stillwater
Schooler, Ollie, Stillwater	Smith, Walter, Vici	Strickland, Edgar L., Hollis
Scott, Alta, Garfield, Ark.	Smith, Mae E., Braggs	Studebaker, Rosa, Stillwater
Scott, Lucy, Agra	Smith, Ora, Stillwater	Strumbaugh, Edith, Fairfax
Scott, Le'a, Edmond	Smith, Bertie, Pawnee	Sturgis, Lena, Guthrie
Selph, Layla, Stillwater	Snoddy, Annie Mary, Coalgate	Sugg, Herbert, Lone Wolf
Settergreen, Lottie, Lamont	Snoddy, Mattie Lee, Coalgate	Swariz, Bula, Stillwater
Sewell, Leslie, Stillwater	Sorrell, Vella, Soper	Swartz, Wm., Meno
Shaffer, Cecile, Chandler	Spencer, Esther, Yale	Swisher Lovada, Stillwater
Shaffer, Fay, Chandler	Spencer, Grace, Yale	Swisher, Mabel, Stillwater
Shelton, Mrs. Frances, Stillwater.	Spencer, Helen, Sand Springs	
	Spicer, Vera, Stillwater	
Tankersley, Mrs. Kate, Stillwater	Thatcher Leslianna, Stillwater	Triplett, Carrie, Stillwater
Tanner, Ruby, Pawnee	Thomas, Fannie, Stillwater	Tripp, Neva, Afton
Tarr, Frances, Stillwater	Thompson, Sarah, Mulhall	Trump, Maude, (Gray) Yale
Taylor, Zelma, Chandler	Thompson, Mollie, Mulhall	Tucker, Elsie, Bridgeport
Taylor, Ruth, Chandler	Thompson, Marguerite, Watonga	Tucker, Pansy, Glencoe
Taylor, Thelma, Guymon	Toler, Mrs. Belle, Jennings	Turner, H. P., Indianoma
Terwhilliger, Aurora, Stillwater	Tracy, Alonza, Chandler	
	Traver, Aileen, Stillwater	
Van Beveren, Raymond, Gonzales, Texas.	Vaughn, Gertrude, Pawnee	Vaughn, Ruth, Chickasha
Voyles, Opal, (Taylor) Stillwater.	Wehr, Laura, Ralston	Wilson, C. D., Shelbyville, Ill.
Wag, Ollie, Afton	Welsh, Nyanzia, Ripley	Wilson, James E, Springfield, Ark.
Walker, Edith, Ryan	Wheeler, Birdie, Stillwater	Wilson, Mrs. Mary, Stillwater
Walters, Minnie, Stillwater	Whipple, Pauline, Stillwater	Wison, Maude, Catoosa
Ward, Pearl, Fairfax	Whitman, Blanche, Agra	Winkleman, Margaret, Cushing
Warinner, Jean, Blackwell	Whitaker, Biddy Mae, Cushing	Winkleman, Myrtle, Cushing
Watson, Mary, Stillwater	White, Emma, Stillwater	Wolaver, W. H., Perry
Webb, Sadie, Coyle	Wiley, Ivan, Stillwater	Wood, Sallie, Hillsboro, Texas
Webb, Cassie, Skedee	Wilkins, Grace, Eads, Colo.	Wood, Wilma, Oklahoma
Webb, Jennie, Orlando	Williams, Athalie, Chickasha	
	Williams, Edith, Mulhall	
Young, Joseph, Stroud	Young, Cecile, Stroud	
Zahn, Esther, Stillwater		

## SUMMARY OF STUDENTS BY CLASSES

## SESSION 1921-22

Post Graduates .....	12
Seniors .....	144
Juniors .....	105
Sophomores .....	251
Freshmen .....	626
Special .....	121
Secondary School .....	145
Secondary Vocational Agriculture .....	175
Vocational Home Economics .....	11
Business .....	40
Trades .....	54
Short Course .....	94
	1776
Summer School 1921 .....	839
Total .....	2615
Duplicate .....	336
	2279
Correspondence School .....	260
Total .....	2539

## THE ALUMNI

The following list of graduates of the College has been compiled in the office of the secretary of the Alumni Corporation, revised up to March, 1922.

The courses from which the alumni have received their degrees are indicated as follows: I, Agriculture; II, Engineering; III, General Science; IV, Home Economics; V, Science and Literature; VI, Education; VII, Commerce and Marketing.

An asterisk (\*) signifies deceased. Maiden surname of married alumnae shown in parenthesis, alphabetically. Where known, initials of husbands of married alumnae shown in parenthesis following given name of alumna. Where addresses are not given, they are not known. Where known, occupations are listed following year of graduation.

(Abercrombie) Rapp, Leona, (Mrs. C. W.), IV, 1917, at home, 370 Arkansas Avenue	Fayetteville, Arkansas
Abercrombie, Russell T., I, 1916. Hardware Business	Cashion
Abernethy, Eunice, VI, 1916, Teacher	Hollis
Abernethy, Oscar, V, 1915	Hollis
(Abernethy) Groves, Ora, IV, 1915, Box 275, at home	Hollis
Acheson, Margaret, VI, 1912, Christian Science Practitioner	Jacksonville, Florida
Adams, Arthur W., I, 1896, Real Estate Agent, 1116 Alston Avenue	Fort Worth, Texas
Adams, J. Homer, I, 1896, Oil Properties Broker, 2933 Hemphill Street	Fort Worth, Texas
(Adams) Weaver, Kathryn, (Mrs. W. C.), IV, 1916, at home, 5424 Lydia Avenue	Kansas City, Missouri
(Adams) Short, Myrle, (Mrs. Robert), IV, 1913, at home, D Street, N. W.	Ardmore
Ahrberg, Fred, I, 1921	Stillwater
(Aikins) McKeeman, Evelyn, IV, 1911, at home	Geneva, Nebraska
Akogi, Yutaka, I, 1912, 122 Kahomachi	Hiroshima, Japan
A'bert, H. R., V, 1913, Superintendent of Schools	Kiefer
Aldridge, Clarice, VI, 1921	Manchester
Alexander, Nell, IV, 1919	Hartshorne
Allen, H. S., II, 1910	Great Bend, Kansas
Anderson, Albert A., II, 1916, Sales Engineer, Ludwig Hemmel & Company, or 534 Fernando Street	Cleveland, Ohio
Anderson, A. B., II, 1902, A. T. & S. F. Railway, or Box 82	Broken Arrow
Anderson, Andy, VI, 1920, Coach, Third District Agricultural School	Magnolia, Arkansas
Anderson, A. W., III, 1900, Lawyer	Woodward
*Anderson, R. E., V 1908.	
Anderson, P. K., II, 808½ Walker Avenue	Houston, Texas
Anderson, R. L., I, 1917 Inspector in Vocational Agriculture, Box 592	Broken Arrow
Andrew, Carl S., I, 1916, County Agent, Box 142	Boise City
Andrews, Myron, I, 1916, Associate Professor of Farm Economics, Agricultural College, Miss.	
Andrews, Maude, IV, 1915, Home Demonstration Agent, Box 535	Madill
Arabajian, H. K., I, 1915, K. Arakelian Ranch	Maders, California
or Arakelian Brothers	Fresno, California
Armstrong, Ola, IV, 1919	Stroud
Arrington, Charles, II, 1921	Lindsay
Atkinson, Mary B., III, 1906, Public Stenographer, The Jeanne d'Arc	Portland, Oregon
Aycock, Thomas VII, 1918, Instructor, Physical Education for Men	Stillwater
Baade, H. J., III, 1910, Court House	Napa, California
Baird, R. O., III, 1908 Deputy Food Commissioner	Fargo, North Dakota
Baker, DeLarue V 1914, Oil Well Contractor, 891 North Cheyenne	Tulsa
(Baldwin) Myrtie, (Mrs. Martyn McMillan), VI, 1920, Teacher in High School	Andarko

- (Baldwin) Dikeman, Mary Bernice, (Mrs. Neil J.), IV, 1920, at home .....Anadarko  
 Ball, H. L., II, 1905, Salesman, Western Electric & Mfg. Co. ....Rochester, New York  
 (Bandel) Kite, Maude, (Mrs. W. C.), IV, 1915, at home, 1444 West 34th Street, Oklahoma City  
 Bandelier, George, II, 1918 .....Stillwater  
 Banks, Hugh, VII, 1921 .....Hobart  
 (Barnes) Heston, Hazel, VI, 1918, at home, Route 4, Care J. B. Heston, Fayetteville, Arkansas  
 Barnes, Henry Dale, I, 1914, Ford Salesman .....Stillwater  
 Bartlett, Alice, VI, 1917, Student in University .....University Park, Iowa  
 Bartlett, Edward E., V, 1912, Treasurer, Bartlett & Collins Glass Company .....Sapulpa  
 Bartlett, E. C., I, 1912, Pine Grove Ranch, Box G .....Rye, Colorado  
 (Bass) Nelson, Lillian, VI, 1915, at home, 526 Sunset Lane .....East Lansing, Michigan  
 Baumann, Charles, V, 1916, Farmer .....Bessie  
 Beard, Fred J., I, 1919, Instructor in Animal Husbandry, O. A. M. C. ....Stillwater  
 (Beatty) Miller, Helen, (Mrs. P. P.), VI, 1920, 211 East Broadway .....Enid  
 Beck, Paul V., V, 1916, H. S. ....Winfield, Kansas  
 Beck, William, I, 1920 .....Blackwell  
 (Bellis) Means, Ida, V, 1914, at home, 1520 East Third Street .....Tulsa  
 Bellis, Charles A., I, 1919, Extension Worker, Box 288 .....Pecos, Texas  
 Bennett, Paul, II, 1908, Building Superintendent of Public Schools .....Stillwater  
 Bentley, M. R., II, 1909, Farm Engineer, Extension Division .....College Station, Texas  
 Berkimer, Miriam, IV, 1921, Domestic Science Teacher in High School, Lennox, South Dakota  
 Berry, Roger, I, 1918, County Agent, 501 North Lee .....Altus  
 Bever, F. Leo, II, 1919, Engineer, Box 1133 .....Ponca City  
 (Bever) Harp, Hazel, IV, 1919, 119 West Central Avenue, at home .....Ponca City  
 Biggin, Dorothea, VI, 1916, Teacher in High School .....Birmingham, Alabama  
 Bilyeu, Floyd M., VII, 1919 Arapaho .....Golden, Colorado  
 Bilyeu, R. I., V, 1905, Smith-Hughes Teacher .....Owasso  
 Black, James A., I, 1917, Ozmun Wholesale Grocery .....Lawton  
 Black, Lizabell, IV, 1921, High School Teacher .....Supply  
 Black, Mary Ann, IV, 1921, 802 West 13th Street .....Oklahoma City  
 Blackwell, Carl P., V, 1911, Head of Agronomy Department, State Agricultural  
 College, Box 10 .....Clemson College, South Carolina  
 Bloom, Charles B., II, 1913, 610 West Fourth .....Tulsa  
 Blue, True C., II, 1909, Manager, Bagnall & Hillis Company, No. 42 Settlement, Yokohama, Japan  
 Blue, Fred R., II, 1905, Road Commissioner .....Ingersoll  
 Boley, A. L., II, 1908 .....  
 Bollinger, Phillip, VII, 1921 .....Kiowa  
 Bonar, H. T., II, 1913, Salesman, Westinghouse Electric & Mfg. Co., or  
 1012 Baltimore Avenue .....Kansas City, Missouri  
 (Bonar) Frank, Mollie, VI, 1916, Box D, at home .....Oilton  
 Bonham, Wendall, I, 1920, Farmer .....Keota  
 Bonnette, H. E., II, 1911 .....  
 Booth, V. John, I, 1917, Smith-Hughes Teacher .....Davidson  
 \*Boutin, H. C., II, 1909. ....  
 Bowers, George W., III, 1897, Railway Conductor, St. Louis & Santa Fe Ry. Company,  
 424 West Wabash Avenue .....Enid  
 Bowers, Charles R., I, 1913, American Hampshire Swine Registry Board .....Peoria, Illinois  
 Bowers, R. L., III, 1904, Lawyer, 801 North Richardson .....Roswell, New Mexico  
 Boyd, Faye, IV, 1921 .....Gracemont  
 (Boyd) Muncie, Nina, (Mrs. J. O.), VI, 1915, at home, 418 Husband Street .....Stillwater  
 Boyd, Oran Cecil, I, 1916, Graduate Student in Plant Pathology, Cornell University,  
 or at home .....Ithaca, New York  
 .....South Hampton, Long Island, New York  
 Boydston, Ethel, IV, 1915. ....  
 (Braden) Robertson, Gertrude, (Mrs. R. K.), III, 1906, at home .....Sapulpa  
 (Bradwell) Newby, Ollie, V, 1909, Music Teacher .....Gate  
 Braly, B. E., I, 1921, Farmer .....Leonard, Texas  
 (Brandon) Lewis, Edna, IV, 1915, at home, West Ninth and Adams .....Stillwater  
 Brannin, Louis, I, 1914, McFarlin Ranch .....Inola  
 Brannin, Mrs. Louis, VI, 1918, at home, McFarlin Ranch .....Inola  
 (Bras) Owens, Ruth, (Mrs. Thos. B.), III, 1907, Teacher, 115 North Maple,  
 .....Albuquerque, New Mexico  
 (Breidenthall) Coppedge, Hazel, VI, 1915, at home .....Cleveland, Kansas  
 Breuer, E. H., II, 1911, Manager, El Reno Foundry & Machine Company, or  
 312 North Rock Island Avenue .....El Reno  
 (Brian) DeMeritt, Naomi, (Mrs. Clyde), IV, 1915, at home, 413 South Harrison .....Cushing  
 Bridges, J. W., VI, 1916, State Board of Vocational Education, Capitol Bldg., Oklahoma City  
 Briggs, Ancel Berne, VI, 1921, Teacher .....Drumright  
 Briggs, G. A., VI, 1921 .....Warner  
 Briggs, Glen N., I, 1916, Assistant Professor of Agronomy, O. A. M. C. ....Stillwater  
 Bright, Merydith, I, 1919 .....Hugo  
 Brishy, Cassie K., IV, 1915, Teacher in High School, Box 315 .....Skiatook  
 Briscoe, Jack, II, 1917, Civil Engineer .....Stillwater  
 Brock, Mary D., VI, 1920, Teacher in High School .....Prague  
 Brodell, A. P., I, 1917, 1114 M Street, N. W. ....Washington, D. C.  
 Brodell, A. C., VI, 1914, Superintendent of Schools .....Skedee  
 Broemel, Agnes, VI, 1915, College Station, Box 237 .....Pulman, Washington  
 (Brooke) Schreiber, Hazel, (Mrs. S. E.), V, 1914, at home, 514 North Lake Street  
 .....Madison, Wisconsin  
 Brooks, Robert N., VI, 1921 .....Chickasha

Broom, Rose, V, 1905, Teacher .....	Howe	
Brower, Belle, IV, 1919, Teacher .....	Eufaula	
Brower, Maude, IV, 1918, Chester Hospital .....	Chester, Pennsylvania	
(Brower) Meeks, Laura, (Mrs. C. V.), IV, 1916, at home, 218 South Cleveland .....	Cushing	
Brown, Mary E., VI, 1917, Teacher, R. F. D. 2 .....	Cushing	
Brown, Charles, III, 1906, Bookkeeper-Truck Gardener .....	East Lansing, Michigan	
Brown, C. B., I, 1913, 1320 East Fifth Street .....	Tucson, Arizona	
Brown, J. J., II, 1903, General Electric Company .....	Manila, Philippine Islands	
Brown, R. W., II, 1921, Telephone Engineering, S. W. Bell Tel. & Tel. Co. ....	Enid	
Brown, O. C., II, 1914, 5737 Kenwood Avenue .....	Chicago, Illinois	
Browning, J. M., I, 1915, Agriculturist, Box 659 .....	Riverside, Illinois	
Brumbaugh, Norma May, IV, 1917, District Home Demonstration Agent .....	Stillwater	
Bryan, Kenneth V., I, 1921, 202 North Orchard .....	Madison, Wisconsin	
Bryant, Ray M., I, 1917, Assistant County Agent .....	Frederick	
Buchanan, W. A., I, 1912, County Agricultural Agent, 12 N. Seventh, Marshalltown, Iowa		
Buddrus, Edmond, I, 1917 .....	Salt Creek, Wyoming	
Buffington, Edith, VI, 1916, Stenographer, O. A. M. C., 323½ Duck Street .....	Stillwater	
(Buffington) McBride, Betha, IV, 1912, at home .....	Stillwater	
Bulen, C. Bernard, III, 1912, Tuberculosis Specialist, 4 West 50th St., New York City, N. Y.		
Bullen, Clarence K., II, 1909, Bullen Lumber Company .....	Stillwater	
Bullock, N. P., Jr., III, 1899, Mail Carrier .....	Pauls Valley	
Bunyard, Claude, I, 1921 .....	Bixby	
Burke, Elizabeth, IV, 1913, 1109 South Carson .....	Tulsa	
Burke, M. P., II, 1909, Texas Oil Company .....	Wichita Falls, Texas	
Burke, W. J., II, 1911, First Lieutenant, 39th C. A. C. ....	Camp Jackson, South Carolina	
Burlison, William L., I, 1905, Head of Agronomy Dept., University of Illinois, Urbana, Illinois		
*Burnett, Roy E., II, 1905.		
Burnham, Alice, IV, 1919, at home, 131 East Fourth Avenue .....	Oklahoma City	
But'er, Joe B., II, 1915, Ass't. Prof. of Civil Engineering, School of Mines .....	Rolla, Missouri	
Butler, Oram, II, 1921 .....	Waukomis	
Caldwell, Mabel, VI, 1918, Instructor in English, O. A. M. C. ....	Stillwater	
Caldwell, Virgil E., V, 1917 .....	Oklahoma City	
Caldwell, Lenore, IV, 1920, 307 Hester Street .....	Stillwater	
Camp, W. E., II, 1910, Agent, General Electric Company .....	Sacramento, California	
Campbell, Jeff C., VII, 1917, Lieutenant .....	Camp Lewis, Washington	
Campbell, Helen, IV, 1921, Care Capt. S. F. Campbell, M. C. ....	Camp Pike, Arkansas	
Campbell, Milton B., I, 1914, Stockman, 1428 Kansas Avenue .....	Chickasha	
Campbell, Rhea, VI, 1915, 411 North Ross, Laboratory of Clinical Pathology, or 409 North Broad .....	Guthrie	
(Campbell) Santee, Viola, IV, 1913, at home, 701 Majestic building .....	Oklahoma City	
Canfield Jesse J., V, 1916, 2767 Boone Street .....	Ames, Iowa	
Canfield, Ralph, V, 1920, Oil Refinery .....	Yale	
Cantwell, Carolyn, V, 1919, Teacher in High School .....	Ponca City	
Cantwell, J. W., Jr., V, 1920, U. S. Veterans Bureau .....	Oklahoma City	
Carlson, Floyd B., I, 1918, Farmer, R. F. D. 2 .....	Meno	
Carlson, Grace, IV, 1917, Teacher High School .....	Enid	
Carlson, Alice, IV, 1919, at home, 319 West Wabash .....	Enid	
Carlton, Howard, VII, 1920, Teacher .....	Wynnewood	
Carlton, Oscar, VII, 1920, Lieutenant, Culver Military Academy .....	Culver, Indiana	
(Carlyle) .....	Kathlene, IV, 1917, at home .....	Kentucky
Carney, Zora Martha, IV, 1914, Bookkeeper, 128 West Seventh Street .....	Rushville, Indiana	
Carpenter, Charles L., I, 1915, Farmer .....	Bridgeport	
Carson, Ross L., III, 1907, Hardware Business, Box 126 .....	Perkins	
Carson, Susie, III, 1902, Hardware Business .....	Perkins	
Carter, R. O., II, 1916, S. W. Bell Tel. & Tel. Company .....	Oklahoma City	
Carter, W. C., II, 1911, Corner Wallace & Grand River, Care W. W. Station, Detroit, Michigan		
Carter, Zaida, IV, 1920, Teacher .....	McMann	
Cass, E. R., I, 1915, 918 South Jackson .....	Tulsa	
Cass, Maude, IV, 1919, 915 South Jackson. Teacher .....	Tulsa	
(Casali) Peck, Louise, (Mrs. O. T.), IV, 1911, at home .....	Stillwater	
(Castle) Vance, Lois, (Mrs. A. W.), IV, 1918, at home .....	Kiowa, Kansas	
(Caton) Younge, Orpha, V, 1909, Indian Agency, Certified Copy Clerk .....	Muskogee	
Caudell, A. N., III, 1897, U. S. National Museum .....	Washington, D. C.	
Cermak, Lizzie, IV, 1921, Teacher .....	Lahoma	
Chandler, Emma, V, 1906, at home, 617 Duck St., Agent for Mutual Life Ins. Co. ....	Stillwater	
Chandler, Fred F., II, 1904, 827 Market Street .....	Bethany, Pennsylvania	
Chase, Martin Ward, I, 1920, Teacher .....	Geary	
(Chester) Goodwin, Bertha, III, 1907, at home, 2019 Edmond Street, St. Joseph, Missouri		
Chewning, W. P., I, 1917, Smith-Hughes Teacher .....	Stigler	
Choate, George R., I, 1915 .....	Indianola	
(Chivington) Tyson, Anna, IV, 1911, at home .....	Welch	
Clark, Arthur C., II, 1906, 540 Nebraska Avenue .....	Long Beach, California	
Clark, F. J., III, 1908, 318 South Brimhall .....	St. Paul, Minnesota	
Clark, C. L., V, 1913, Route 6, Box 47-A .....	Fort Worth, Texas	
Clark, J. T., III, 1896, Farmer .....	Puerto Princessa, Palava, Philippine Islands	
Clausen, Chester A., I, 1921, Professor of Vocational Agri., High School .....	Choctaw	
Clausen, Elsie, VI, 1916, Bookkeeper, 325 West Seventh .....	Oklahoma City	
Clausen, Lillian, VI, 1916, Teacher, Home Ec. Dept., Lewis Institute .....	Chicago, Illinois	
Clausen, Nellie C., IV, 1914, Walter Reed Hospital .....	Washington, D. C.	

Clausen, Mrs. B. C., VI, 1912, University of North Dakota .....	Bismark, North Dakota
Clausen, B. O., II, 1912, Cellu'oid Zapon Company .....	Philadelphia, Pennsylvania
Clausen, R. E., I, 1910, 315 Hilyard Hall .....	Berkeley, California
*Clay, Henry, V, 1919.	
Clemmer, H. J., I, 1915, Field Station, U. S. Experiment Station .....	Dalhart, Texas
Cloukey, H. U., III, 1910, Centrifugal Engr., 544 Railway Exchange .....	Chicago, Illinois
Cobb, A. L., II, 1913, 202 West 10th Street, Ass't. Sup't. W. R. Ostrander & Company .....	New York City, New York
(Cobb) Payne, Mary, IV, 1913, at home .....	Manhattan, Kansas
Coburn, Carrol, II, 1912, 3212 Gilbert Avenue .....	Cincinnati, Ohio
Cole, Frank, III, 1908, Route 1 .....	Anaconda, Montana
Coleman, Lester, II, 1921 .....	Red Rock
Collier, T. L., VI, 1920, Teacher, High School .....	Oklahoma City
Collins, Blanche, VI, 1919, Teacher, Box 514 .....	Sand Springs
Collins, Mrs. Nannie, IV, 1920 .....	Doug as
Comstock, Harry, II, 1905, General Superintendent .....	Denver, Colorado
*Comstock, Frank, II, 1912.	
Conklin, Harry E., II, 1914, Westinghouse Elec. & Mfg. Co., 215½ W. 1st St., Oklahoma City .....	Dustin
Conn, Julian, II, 1915, County Engineer, Box 12 .....	Dallas, Texas
Connell, William B., V, 1912, 1803 Richardson .....	Stillwater
Conner, W. A., I, 1917, 219 W. Ninth Avenue, Director of Extension .....	State Collge, New Mexico
Conway, Wiliam T., I, 1910, State Club Leader .....	Guthrie
Cook, Harold P., II, 1914, 1309 West Noble .....	Oklahoma City
Cooley, D. P., VI, 1916 .....	Oklahoma City
Coppedge, William H., VII, 1920, 217 Grain Exchange .....	Yukon
Corbin, D. C., VI, 1919 .....	Altus
Corbin, Bert O., II, 1916 .....	
*(Cox) Fisher, Mary, IV, 1913.	
Correll, V. I., V, 1912, Teacher in High School .....	Sand Springs
Correll, Lawrence E., I, 1919, Athletic Coach .....	Chilocco
Courtney, M. C., II, 1921, Inst. in Manual Training, 1408 Oregon Avenue .....	Chickasna
Cowan, J. P., VI, 1920, Superintendent of Schoo's .....	Bay St. Louis, Mississippi
Crawford, C. L., I, 1915, County Agent .....	Georgetown, Texas
Crawford, C. W., III, 1909, Chemist, Bureau of Chemistry, U. S. D. A., Washington, D. C. .....	Fairfield, Alabama
Crocker, Fred, V, 1912, Drawer F, Hospital .....	
*(Cummins) Hamilton, Maxie, VI, 1916.	
(Cummins) Richardson, Ina, (Mrs. Fred), VI, 1919, at home, Box 312 .....	Yale
Cunningham, Katherine, VI, 1917, Teacher .....	Pawnee
Curnutt, Minnie, IV, 1920, Teacher .....	Beggs
Dale, Ernest B., II, 1914 .....	Headrick
Darlow, A. E., I, 1919, Assistant Professor of Animal Husbandry, O. A. M. C. ....	Stillwater
Davidson, Frances, VI, 1920, at home .....	Kiefer
(Davidson) Johnson, Lois, (Mrs. D. R.), VI, 1918, at home, 113 Welch .....	Ames, Iowa
Davis, George E., II, 1916, Drawer F, Empire Gas Co. ....	Eldorado, Kansas
Davis, Alice, VI, 1920 .....	Ponca City
Davis, R. N., I, 1911, University of Arizona, Dairy Department .....	Tucson, Arizona
DeBord, George G., V, 1914, Harvard Student, 706 Huntington Avenue, Boston, Massachusetts .....	Newkirk
Denton, Mary Belle, IV, 1918, at home, Box 246 .....	Newkirk
Denton, Esther, IV, 1917, Teacher, 113 South Walnut Street .....	Pawhuska
Denton, Elizabeth, IV, 1916, Care Osage Journal .....	
(Dillon) Moorhouse, Lucille, (Mrs. H. W.), V, at home, 6611 N. Ashland, Chicago, Illinois .....	St. Louis, Missouri
Dickson, G. K., V, 1917, 4926 Washington Boulevard .....	
*Dolde, W. Earl, II, 1912.	
Dolphin, P. M., VII, 1921 .....	Calumet
(Donart) Coffey, Cora, II, 1900, 326 East 14th St. ....	Oklahoma City
Donart, C. R., I, 1899, 1301 North Ellison .....	Oklahoma City
(Donart) Wilcoxen, Gladys, IV, 1914, at home .....	Mareamec
(Donehoo) Haymes, Grace, (Mrs. W. R.), IV, 1918, Teacher .....	Hunter
*Dorman, Will S., II, 1911.	
Doty, Harold, I, 1915, Creameryman, Dairy Department, O. A. M. C. ....	Stillwater
(Doty) Shellhammer, Lucille, IV, 1919 .....	Oklahoma City
Dougan, E. E., II, 1907, General Electric Co., or 70 Burbank Street, Pittsfield, Massachusetts .....	Yale
Douglas, Marion, VI, 1917, High School Principal .....	Cu'hrie
Doug'as, Glen N., II, 1920, Superintendent of Cotton Warehouse .....	Lake Worth, Florida
Drake, T. J., V, 1913, Real Estate Business .....	Hominy
Drummond, A. A., I, 1915, Cattleman, North Price Avenue .....	Hominy
Drummond, Frederick Gentner, V, 1914, General Merchandise Business .....	Stillwater
DuBois, Robert, III, 1919, Associate Professor of Chemistry, O. A. M. C. ....	Little Rock, Arkansas
Duck, T. W., II, 1912 .....	
Duck, F. E., I, 1896, Farmer, Route 3 .....	Stillwater
Dunlavy, Henry, I, 1919, Plant Breeder, Allen Farms .....	Allenfarm, Texas
Dunlap, G. B., VI, 1914, County Agent .....	Durant
Durham, Sam B., I, 1904, Farm Manager .....	Lexington, Mississippi
(Dysart) Teters, Minnie, III, 1899, at home, 1312 West 16th .....	Oklahoma City
Eads, Ve'ma, IV, 1913, Head Home Economics Department, High School, or 200 North Okmulgee Avenue .....	Okmulgee
Eberle, Dovie, III, 1906, Dietitian, U. S. Pub. Health Service .....	Camp Kearney, California
Edson, E. Otis, I, 1915, Assistant Poultry Specialist, O. A. M. C. ....	Stillwater

Elston, W. B., II, 1915, Care Curtis Motor Co., Garden City, L. I., Somewhere in South Amer.  
 Emmons, Clarence, II, 1918, Engineer, Box 4, Route 1 .....Vinita  
 Emmons, Mrs. Clara, VI, 1917, Box 4, Route 1 .....Vinita  
 English, William L., I, 1905, Frisco Agriculturalist, Room 438, Frisco Bldg., St. Louis,  
 Mo., or Fruit Grower .....Bentonville, Arkansas  
 (English) Lantz, Maude, III, 1907, at home, Box 423 .....Orland, California  
 Epperson, Jesse Harrison, V, 1914, Director of Bacteriological Laboratory, or  
 1202 Mangum Street .....Durham, North Carolina  
 Evans, E. Ray, I, 1912, Holekamp Lumber Co., Old Orchard .....St. Louis, Missouri

Fair, R. M., VI, 1917, Supt. Stapleton Consolidated School .....Stapleton, Nebraska  
 Fancher, Ted, I, 1913, Livestock Breeder .....Edmond  
 Fancher, R. A., I, 1912, Registered Cattle Business .....Edmond  
 Faulds, N. M., II, 1910, Truck Farmer, Route 1 .....Clearwater, Florida  
 Fellows, Iris, VI, 1917, Student, University of Wisconsin .....Madison, Wisconsin  
 Fellows, Reeda, IV, 1917, Nurse, Johns Hopkins Hospital .....Baltimore, Maryland  
 Fellows, Keith, II, 1915, County Engineer, Court House .....Stillwater  
 Fenema, Pete, I, 1920, Wholesale Ice Cream Manufacturer .....Clinton  
 Fenema, Nick, I, 1915, Room 409, 204 Franklin Street .....New York City  
 Fetzner, Dale, I, 1920 .....Helena  
 (Finch) Connell, Laura (Mrs. James), IV, 1915, at home, 1803 Richardson Ave., Dallas, Texas  
 Finnell, H. H., I, 1917, Agriculturalist, Box 512 .....Ravia  
 (First) Fern, (Mrs. Nick Fenema), VI, 1916, Teacher, Room 409, 204 Franklin Street,  
 .....New York City, N. Y.

\*Fish, Wayne, II, 1918.

(Fisher) Hinkel, Florence, (Mrs. J. W.), IV, 1917, at home, 412 West Street .....Stillwater  
 (Fisher) Marx, Anna (Mrs. Loyd), IV, 1915, at home, 214 Cleveland .....Pawnee  
 Fisher, Teague, I, 1920, Principal Consolidated School .....Ripley  
 Fisher, John M., II, 1915, Hoffman Building .....Ford City, Pennsylvania  
 Fisher, J. G., II, 1910, Manager of Ranch, Box 27 .....Goodyear, Arizona  
 Flower, A. W., II, 1902, Federal Glue & Paste Co., 220 W. Ontario .....Chicago, Illinois  
 Folk, Joe, II, 1921, Teacher in High School, Box 325 .....Shamrock  
 Folk, John, II, 1919, 710 Fifth Street .....Alva  
 Ford, A. G., III, 1898, Proprietor and Manager, Insurance and Loans .....Muskogee  
 Ford, W. W., II, 1913, Teacher in High School .....Shawnee  
 Forrester, C. T., I, 1917, Box 2 .....Stratford  
 Forrester, Willie B., I, 1921 .....Clinton  
 Forrester, Wirt E., I, 1915, Box 610 .....Winfield, Kansas  
 (Evans) Whittenberg, Ruth, (Mrs. George), IV, 1917, at home, 519 West Street, Stillwater  
 Forrester, D. R., I, 1913 .....Osceola, Arkansas  
 Forrester, Nellie, IV, 1919, at home, Box 215 .....Stuart  
 (Foster) Rogers, Nell, I, 1914, at home, R. F. D. .....Gage  
 Forsyth, Fred, II, 1917, Tool Dresser .....Dewey  
 Forsyth, Lt. Andrew, I, 1917, U. S. Cavalry .....Fort Oglethorpe, Georgia  
 Foster, Faye E., I, 1915 .....Perry

\*Francis, Victor, II, 1908.

Franklin, Marion E., VI, 1921, Manual Training Teacher .....Tablequah  
 Freeman, Ray F., I, 1916, Stock Farmer.  
 Freeman, Zanon, B., V, 1921 .....Enid  
 (French) Hill, Mattie, IV, 1917, at home .....Fort Madison, Iowa  
 French, Earl R., I, 1920, Redpath Chautauqua, Kimball Bldg. ....Chicago, Illinois  
 Frenzel, H. H., II, 1912, 201 Rose Avenue .....Western Springs, Illinois  
 (Frieday) Barnett, Almira, IV, 1912, at home, 4178 Winona Court .....Denver, Colorado  
 Frieday, Gladys, IV, 1917, Teacher .....Springer, New Mexico  
 Friedemann, Otto, V, 1920, Box 331 .....East Lansing, Michigan  
 Friedemann, Theodore, V, 1915, Dept. of Medicine, Washington University, or  
 Euclid and Kings Highway .....St. Louis, Missouri  
 Friedemann, William C., V, 1913, Ass't. Chemist, Experiment Station .....Stillwater  
 Frier, C. H., II, 1911 .....Sulphur  
 Frost, John A., II, 1917, Foreman, Empire Co., or Box 394 .....Augusta, Kansas  
 Frost, Reuben, L., I, 1921, Voc. Agri. ....Cataman, Samara, Philippine Islands  
 Fry, Curtis, I, 1920, R. F. D. "A" .....Thomas  
 Fry, Ralph B., I, 1921 .....Britton  
 Funda, F. P., II, 1910, Rock Island R. R. Co., or 2610 Summitt Ave., Little Rock, Arkansas

Gaasch, Glen, II, 1909, Box 476 .....Grandfield  
 Gager, E. H., II, 1908, Room 524, 72 West Adams, or 1318 Eddy Street, Chicago, Illinois  
 Gallagher, E. C., II, 1909, Director of Athletics, O. A. M. C. ....Stillwater  
 Galyon, E. O., II, 1911, 5764 Goodfellow Ave., or 1906 Pine St. ....St. Louis, Missouri  
 Cammie, R. J., II, 1910, General Roadmaster, T. & P. R. R. Co. ....Alexandria, Louisiana  
 Gardner, Frank, II, 1911, 1008 Texas Avenue .....Houston, Texas  
 Carlock, Harry, I, 1921, Extension Division, Missouri University, or  
 Room 201, Agri. Bldg. ....Columbia, Missouri  
 Garrett, E. L., VI, 1915, Box 176, County Agent .....Coldwater, Kansas  
 Gaudian, Will, II, 1912, Engineer, Box 475 .....Balboa Heights, Canal Zone  
 Gay, Thurman, VII, 1920, Coach, High School .....Dewey  
 Gaymon, Sue, IV, 1920, Teacher, High School, 322 N. Hightower .....Alus  
 Gentry, Irma, VII, 1920 .....Pawnee  
 Geren, Louis, I, 1917, Baltimore Hotel .....Muskogee  
 Getgey, John J., V, 1914, Getgey Manufacturing Company .....New Britain, Connecticut

Gilbert, N. T., II, 1898, Producers State Bank .....	Tulsa
Gilbert, J. C., I, 1904, Acting Director, Bureau of Markets .....	Harrisburg, Pennsylvania
Giles, O. A., VI, 1919, Smith-Hughes Agri. Teacher .....	Sand Springs
Gilliam, Winnie, IV, 1919 .....	Ardway, Colorado
(Garringer) Witte, Clara, (Mrs. Harold), 851 Rebecca Ave. ....	Wilkinsburg, Pennsylvania
Gilmer, Thomas P., II, 1913, City Electrician .....	Clinton
Glendenning, George S., II, 1920, City Engineer .....	Enid
Glockner, C. L., II, 1917 .....	
Goe, Walter B., VI, Superintendent of Schools .....	Hillsdale
Goff, T. T., III, 1900, Teacher in State Normal School .....	Whitewater, Wisconsin
Gollehon, Floyd, II, 1910, Box 211 .....	Cherokee
Goltry, Herschel U., V, 1913, Farmer and Stockman .....	Amber
Gillum, J. L., V, 1921 .....	Stillwater
Goodwin, R. Q., VI, 1921 .....	Stillwater
Green, Harold, VII, 1921, Abstractor .....	Chandler
Grimes, Lucille, V, 1921 .....	Hobart
(Goold) Eleener, Christine (Mrs. G. C.), IV, 1919, 6648 Walrond Ave., Kansas City, Missouri .....	
Goom, Austin, V, 1912, Banker, Farmers State Bank .....	Ripley
Gordon, Frances Mae, IV, 1916, Teacher, High School, Box 452 .....	Haskell
(Gordon) Walters, Julia, (Mrs. Joe), VI, 1916, at home .....	McComb
Gongler, F. A., I, 1939, County Agent, 645 Hampshire Street .....	Quincy, Illinois
Graham, Earl E., I, 1915, Secondary Agricultural School .....	Magnolia, Arkansas
Graham, Milton C., VI, 1916, Care Grover & Hewitt Plantation .....	Mariana, Arkansas
Graham, Quentin, II, 1914, Westinghouse Elec. & Mfg. Co., Power Engineering Department .....	East Pittsburg, Pennsylvania
Graham, Douglas S., V, 1914, Elk Fire-Brick Co. ....	St. Marys, Pennsylvania
Granberry, Carl Ellis, VI, 1914 .....	
Gravelle, E. E., II, 1913, 502-503 Railway Exchange Bldg .....	Muskogee
(Gray) Wheeler, Ruth, (Mrs. Commodore), V, 1917, 920 North Main Street .....	Blackwell
Gray, Willis N., II, 1917, Route 2 .....	Avada, Colorado
Gray, Julia, IV, 1918, Teacher, Box 72 .....	Latham, Kansas
(Gray) Ward, Nina, IV, 1916, Fourth and Oklahoma Streets .....	Woodward
Gray, Earle, II, 1920, 202 South Hillside Street .....	Wichita, Kansas
*Gray, William F., I, 1912 .....	
Green, William J., I, 1916, Extension Agronomist, O. A. M. C. ....	Stillwater
Gregory, H. W., I, 1912, 416 Harvey Avenue .....	West Lafayette, Indiana
Greiner, E. M., III, 1899, Chemist .....	New Bedford, Pennsylvania
Griggs, Oscar C., VI, 1915, 43 North Wheeling Avenue .....	Tulsa
Gulick, H. W., II, 1903, Metallurgical Engineer, Moore-Jones Metal Co., St. Louis, Missouri .....	
Guynn, N. P., II, 1904, Chief Draftsman, Illinois Steel Co., or 7407 Euclid Ave., Chicago, Ill. ....	
(Hagar) Groves, Hyral, (Mrs. J. T.), V, 1910, 131 E. Fondulac .....	St. Ripon, Wisconsin
Hagar, William Edgar, I, 1914, Teacher, High School .....	Vinita
(Hale) Cooley, Fannie, VI, 1917, at home .....	Altus
Hall, Roy V., II, 1911, 321 Walnut Street .....	Texarkana, Arkansas
Hall, Georgiana, IV, 1920, Domestic Science Teacher, High School .....	Ryan
Hal', Ethel Faye, VI, 1914, Teacher .....	Apache
Ham, Joe, II, 1919, Empire Gas and Fuel Co. ....	Eldorado, Kansas
Ham, John, VII, 1921 .....	
Hamblin, Clyde, II, 1914, 3720 New Hampshire Ave. (Ventilating Engr.), Washington, D. C. ....	
Hamilton, F. C., V, 1910, Box 203 .....	La Junta, Colorado
Hamilton, J. Homer, V, 1910 .....	
(Hamilton) Cross, Fearn, (Mrs. F. B.), V, 1913 .....	Stillwater
Hamon, C. A., II, 1910, Electrical Engineer, Westinghouse Elec. & Mfg. Co., or 89 "H" Street .....	Salt Lake City, Utah
*Hamon, R. J., V, 1910 .....	
Hamon, Fannie, V, 1908, at home .....	
Hampton, Pearl, IV, 1921 .....	Blocker
(Hancock) Hess, Joy, B., IV, 1909 .....	
Hancock, A. Vernon, II, 1907, Manager Southwestern General Electric Office, Insurance Building .....	Oklahoma City
Hann, F. R., Jr., II, 1912 .....	
Hanna, O'Lula, VI, 1919 .....	Braymer, Missouri
(Hannifan) Vance, Edna, (Mrs. L. R.), IV, 1914, at home .....	Kiowa, Kansas
Harnden, Millard G., I, 1917, Smith-Hughes Work, O. A. M. C. ....	Stillwater
Harnden, F. D., VI, 1914, 515 Lewis Street .....	Stillwater
Harnden, E. E., V, 1912 .....	Manhattan, Kansas
Harris, Motier, VI, 1917, Teacher, 2120 Grove Street .....	Berkeley, California
(Harris) Burn, June Inez, (Mrs. Farrar), VI, 1913 .....	Roche Harbor, Washington
Harrison, L. D., V, 1913, 133 East 14th Street .....	Oklahoma City
Hart, Haden, I, 1913, Stock Farmer .....	Spearman, Texas
Hartenbower, A. C., I, 1905 .....	Perry
Hartman, T. J., III, 1898, Vice President, Producers State Bank .....	Tu'sa
Harthorne, E. C., II, 1912, Chief Operator, Sub-station, Box 544 .....	Balboa, Canal Zone
Harvey, C. F., II, 1911 .....	Stillwater
Harvey, Ruth, VI, 1916, 1751 Park Road, N. W. ....	Washington, D. C.
Harvey, J. W., II, 1913, 1727 P Street, N. W. ....	Washington, D. C.
Hastings, Alice, III, 1905, and IV, 1914, 417 Husband Street .....	Stillwater
Haston, Clyde, I, 1920, Box 146 .....	Webber Falls
Hatch, Hazel, V, 1916, Missionary, Care Route 3, Enid .....	Korea, China

Hatch, Thomas J., I, 1920, Route 3 .....	Enid
Havenstrite, Ralph W., I, 1915 .....	Lovell
Hayes, Clara, VI, 1916, Teacher, High School .....	Enid
Hayes, Philip H., VI, 1917, Box 124 .....	Agricultural College, Mississippi
Haymes, Winton R., I, 1917, Teacher of Vocational Agriculture .....	Hunter
Hays, Frank A., I, 1909, Prof. of A. H., University of Wyoming .....	Laramie, Wyoming
Hays, (Capt.) George P., II, 1920, School of Fire .....	Fort Sill
Hays, Glen, VI, 1915, .....	Utica, Kansas
Hedger, H. R., I, 1913, Box 541 .....	Idabel
Heilman, Paul L., VI, 1916, Box 81 .....	Afton
Helema, Mabel, VI, 1921, Teacher, Masonic Home .....	El Reno
Helmer, Richard, II, 1917, Civil Engineer .....	Gotebo
Hemphill, Ora L., II, 1909, District Engineer, Arkansas Highway Department, or 2500 West 14th Street .....	Little Rock, Arkansas
Henderson, Georgia, VI, 1916, Teacher, Box 633 .....	Warren, Arizona
(Henderson) Bassler, Ida Maye, (Mrs. C. S.), VI, 1918, 126 Main Street .....	Stillwater
Hendrickson, Elmo, I, 1916, Farmer .....	Boynton
Hendrickson, Margaret, IV, 1921 .....	Boynton
Hendrix, Rex, VII, 1921, 320 Chautauqua .....	Norman
Henson, Helen Hoskinson, (Mrs. Ray), IV, 1921, Care Ag. Dept., Iowa State College .....	Ames, Iowa
Henson, E. Ray, I, 1920, Care Ag. Dept., Iowa State College .....	Ames, Iowa
Henson, Ethel, IV, 1915, Teacher .....	
(Herndon) Herron, Maye, IV, 1914, (Mrs. Leonard G.), Box 48 .....	Idabel
Herron, Leonard G., 1912, County Agent, Box 48 .....	Idabel
Herrick, H. C., II, 1912, Manager, Kansas Truck & Motor Co. ....	Wichita, Kansas
Hertzler, Joy, VI, 1919, R. F. D. 3 .....	Aline
Heston, Lucile, VI, 1916, Teacher, Box 191 .....	Devol
Heston, Adrian, II, 1915 .....	
(Hewett) Conway, Norma, IV, 1916, at home .....	Ranger, Texas
Hewett, Paul M., I, 1915, Instructor, Route 2 .....	Little Falls, Minnesota
Hicks, J. Beatrice, IV, 1921, Teacher .....	Luther
Hiet, M. E., II, 1912, County Engineer .....	Nowata
*(Hiet) Wiley, Sadie, IV, 1915, .....	
Hildebrand, Mrs. E. B., IV, 1918, Route 5 .....	Chickasha
Hildebrand, Eric B., I, 1918, Route 5 .....	Chickasha
Hildebrand, L. E., II, 1910 .....	
Hilzenberg, L. W., VI, 1915, 605 West 10th Street .....	Cisco, Texas
(Hill) Wilber, Ruth, (Mrs. P. A.), IV, 1917, 315 Knoblock Street .....	Stillwater
(Hill) Bartlett, Vera, (Mrs. E. C.), VI, 1912, Pine Grove Ranch, Box G .....	Rye, Colorado
Hines, G. E., II, 1905, Chief Engineer, Ullen Contracting Co. ....	Suffolk, Virginia
Hinkel, John W., V, 1917, 412 West Street .....	Stillwater
*Hirschi, Fred, II, 1918, .....	
Hirzel, Homer, VII, 1920, 504 East Noble .....	Cuthrie
Hitchcock, Ethel, VI, 1917, Teacher .....	West Plains, Missouri
(Hitchcock) Corbin, Edith, VI, 1917, Teacher .....	Altus
Hobbs, Hugh, II, 1912, 4142 Lafayette Street .....	St. Louis, Missouri
(Hobbs) Mark'and, Gladys, (Mrs. Waldo), V, 1921, Teacher .....	Avant
(Hogle) Farley, Ellen, (Mrs. Ross), IV, 1919, at home, 5 N. 3rd Street .....	Lawton
Hoke, Charles E., I, 1907, Cashier, First National Bank .....	Stillwater
Hoke, George, V, 1911, Attorney, Hoke & Hoke .....	Stillwater
Hoke, Harry G., II, 1907, Electric Shop .....	Stillwater
Hoke, Jess W., VII, 1920, Student, University of Oklahoma .....	Norman
Hoke, Mae, I, 1912, Box 811 .....	Pendleton, Oregon
Hoke, Roy T., I, 1917, Hoke & Hoke, Real Estate and Insurance .....	Stillwater
(Hoke) Hart, Rhoda Charlotte, IV, 1914, at home .....	Spearman, Texas
(Holford) Talbot, Ina, (Mrs. Alfred), VI, 1914, 1328 Manheim Place .....	Kansas City, Missouri
(Holleman) Zeigler, Mathilda Gertrude, IV, 1914, 5918 Anderson Ave., .....	Kansas City, Missouri
Hollis, Mrs. Jessie Dye, IV, 1921, 320 E. 7th .....	Oklahoma City
Holmes, D. L., V, 1908, 487 Selden Avenue .....	Detroit, Michigan
Holmes, O. W., I, 1908, 4825 California Street .....	San Francisco, California
Holt, Mrs. Mable Davis, V, 1921 .....	Shawnee
Holton, Pauline, IV, 1915, Teacher in High School .....	Sand Springs
Hoover, George W., III, 1903, Chemist, Room 1626 Transportation Building, U. S. Food and Drug Laboratory .....	Chicago, Illinois
Hopkins, Maude, IV, 1918, Teacher, Box 122 .....	Altus
Hopkins, Blanche, IV, 1918, Teacher .....	Luther
Hopps, C. W., II, 1911 .....	
Horner, J. T., VII, 1916, Prof. of Economics, Michigan Ag. College, East Lansing, .....	Michigan
Horton, Charlotte, V, 1915, Teacher .....	Ponca City
Horton, Earl E., I, 1916, County Agent .....	Perry
Hostetter, Eston, II, 1919, 207 Barnes Bldg. ....	Muskogee
(Houck) Stewart, Afton, VI, 1916, at home, 4478-A, Cook Ave. ....	St. Louis, Missouri
Houck, Kathleen, IV, 1919, at home .....	Stillwater
House, R. M., II, 1903, Box 654, Farm Implement Dealer .....	Bristow
Houston, Mamie G., III, 1903, Teacher, Box 113 .....	Cambridge, Idaho
Howell, Carleton, II, 1906, Electric Bond and Share Co., 71 Broadway, New York City, or 8 Fernwood Place .....	Upper Mountclair, New Jersey
Hubler, Willis A., III, 1910, Insurance .....	Fairfax
Huddleson, I. F., V, 1915, Box 584 .....	East Lansing, Michigan

Huffman, Lewis D., V, 1914, 204 Masonic Bldg., Real Estate .....	Elyria, Ohio
Huffnagel, Pauline, VI, 1917, Register of Deeds, Court House .....	Tulsa
(Hunt) Julian, Gertrude, III, 1902, at home .....	Terlock, California
Hunter, Alice, IV, 1919, 803 College Avenue .....	Blackwell
Hurst, J. B., I, 1917 .....	Jefferson
Hurst, R. Bradford, III, 1901, Licut. Sc., U. S. Navy, Care Postmaster, San Francisco, Calif. (Hurst) Suits, Nina B., III, 1903 .....	Jefferson
Isenberg, Olivia, I, 1919, Teacher, 423 Eighth Street .....	Perry
(Isenberg) McMains, Vera, VI, 1919, Teacher .....	Fairfax
Ives, Fred H., I, 1910, Head, Dept. of Agriculture, West Texas State Normal, Canyon, Texas	
Ives, E. E., II, 1917, E. L. Doherty & Co. ....	Bartlesville
Jablow, Frances Train, (Mrs. Charles), IV, 1915, 137 Avenue "A", Westinghouse Plan, .....	East Pittsburgh, Pennsylvania
Jack, Eula, VI, 1917, Box 375, Teacher .....	Arapaho
(Jacobs) Hal, Beulah, (Mrs. George), IV, 1921, Care Massachusetts Institute of Technology .....	Boston, Massachusetts
Jackson, J. A., II, 1910, 300, Interstate Bldg. ....	Kansas City, Missouri
Jackson, William E., I, 1914, Instructor in Hort., O. A. M. C. ....	Stillwater
Jacobs, A. W., I, 1913, County Agent .....	Atkin, Minnesota
Jacobs, Lewis A., I, 1913, County Agent .....	Anoka, Minnesota
(Jacobs) Autry, Ethelyn, VI, 1915, at home, Route 6, Box 46 .....	Vancouver, Washington
James, Cornelia, VI, 1916, Manager, Rosemary Hat Shop .....	Stillwater
(James) Keeshan, Helen, IV, 1913, at home, 309 West 18th Street .....	Oklahoma City
Jancway, C. Harold, VII, 1918, Collinsville National Bank .....	Collinsville
Janeway, George M., III, 1902, Collinsville National Bank .....	Collinsville
(Janeway) Kropps, Helen, (Mrs. Samuel J.), IV, 1912, 238 Boylston St., Watertown, Mass. (Janeway) Boozie, Lenora, V, 1908, at home .....	Shawnee
(Jarrel) Hartman, Mary, (Mrs. T. J.), III, 1903, 640 North Denver .....	Tulsa
Jarrell, E. A., III, 1896, 1710 Flanila Street .....	Bakerfield, California
Jeffords, Sherman, I, 1912, 1516 University Place .....	Columbia, South Carolina
Jeffords, Mary E., IV, 1914, 785 North Euclid Avenue .....	St. Louis, Missouri
Jenkins, Henry E., VI, 1918, Jenkins Dry Goods Co. ....	Frederick
Jessee, Walter B., I, 1911, Farmer, Box 24 .....	Supply
(Jewett) Barnhart, Kate A., III, 1901, at home, 2007 N. Market .....	Wichita, Kansas
Johnson, H. J., II, 1918, American Tel. & Tel. Co. ....	St. Louis, Missouri
Johnson, S. B., I, 1912, Box 322 .....	Montrose, Colorado
Johnson, Laura, VI, 1912, Teacher, Box 127 .....	Henrietta
Johnson, Norma, V, 1909, Teacher, 401 North Seventh Street .....	Clinton
Johnson, Harry E., VII, 1917 .....	Little Rock, Arkansas
(Johnson) Crosby, Lucy, V, 1912, Teacher .....	
Johnson, Janie Mae, IV, 1921 .....	Pawnee
*Johnson, J. C., II, 1905.	
(Jones) Ikard, Caroline, (Mrs. W. L.), IV, 1920, .....	Twin Falls, Idaho
Jones, Fred L., V, 1917, Assistant Cashier, American National Bank .....	Stillwater
Jones, E. L., II, 1904, Electrical Engineer .....	
Jones, Lloyd R., V, 1915, U. S. P. H. S. Hospital .....	Greenville, South Carolina
(Jones) Tuttle, Jeanne, (Mrs. Richard), VI, 1916, 318 East Oakes .....	Cushing
Jones, C. Shelley, II, 1910 .....	
Jones, Daisy Ladine, IV, 1914, 523 West Street .....	Stillwater
(Jones) Kent, Eva, VI, 1914, at home .....	Signet
Jones, C. Vincent, III, 1902, Lawyer .....	Clay Center, Kansas
Jordan, Charles Neal, VI, 1914, Metallurgical Chemist .....	
Kane, Cora, IV, 1920 .....	Stillwater
Katz, Henrietta, VI, 1915, Teacher .....	Sapulpa
Katz, Sigmond, I, 1920 .....	Sapulpa
Keiffer, Roscoe, I, 1920, 639 Matthews Street .....	Fort Collins, Colorado
Keller, W. F., V, 1917, Director, Bacteriology Laboratory, 131 American National Bank Building .....	Oklahoma City
Kennon, William D., VI, 1914, County Agent .....	Alva
Kenny, Roy W., I, 1920, Ass't. Coach, O. A. M. C. ....	Stillwater
Kenworthy, Chester, I, 1917, 1117 Freeman Street .....	Muskogee
Kenyon, Lucille, VI, 1915, Teacher, Box 461 .....	Cheyenne Wells, Colorado
Kenyon, R. S., II, 1903, 815 Paloma Avenue .....	Oakland, California
Kenyon, R. E., II, 1910, 815 Paloma Avenue .....	Oakland, California
Kerr, R. H., III, 1903, Chemist, Meat Inspection, U. S. Dept. of Agri., Hyattsville, Maryland	
Keys, Alma, IV, 1917, Domestic Science Teacher, High School, or 714 E St., N. W., Ardmore	
Kezer, C. L., III, 1901, Principal, Secondary School, O. A. M. C. ....	Stillwater
Kibler, J. Byron, II, 1920, Light and Power Comptny .....	Oklahoma City
Kidd, J. W., II, 1904, Professor of Engineering .....	El Paso, Texas
Kie, Eugene, 1915, Superintendent of Schools .....	Jennings
Kilpatrick, Charles, I, 1917 .....	Jet
(Kilpatrick) Gregory, May, IV, 1914, 416 Harvey Avenue .....	Lafayette, Indiana
(Kilpatrick) Newton, Maude, (Mrs. Roy), IV, 1919, 5558 University Avenue, Chicago, Illinois	
Kilpatrick, Earl, I, 1912, Box 231 .....	Mariana, Arkansas
Kimbell, James Albert, I, 1917, 609 Arlington .....	Lawton
Kinder, W. E., III, 1903, 1641 South Wichita Street .....	Wichita, Kansas
King, Nancy Ann, IV, 1920, Route 3 .....	Enid

King, Beverly D., II, 1910, Engineer and Surveyor .....	Wharton, Texas
(Kirkpatrick) Anderson, Victoria, V, 1910, Box 182 .....	American Falls, Idaho
(Kirkpatrick) Benson, Cecil, IV, 1909, 2221 E. 31st St. ....	Oakland, California
Kirkpatrick, Katie C., V, 1911, Teacher, 108 East Washington .....	Guthrie
Knanss, E. J., I, 1906, 4807 East 23rd Street .....	Kansas City, Missouri
Knight, Eugene, I, 1919 .....	Ninnekah
(Knight) Brahaney, Lillian, VI, 1917, Box 126 .....	Ranger, Texas
Knoblock, Fred L., II, 1912, Peoples Home Corp., 210 Mayo Bldg. ....	Tulsa
Knoblock, Cecil C., V, 1915, Knoblock-Wood Laboratories, Box 576, .....	Tulsa
Kolshorn, Agnes, Y, 1913 .....	
Kooker, E. Ralph, I, 1910, 202 Exchange Building .....	Bellingham, Washington
Kraemer, Gena Marie, VI, 1921 .....	Warner
(Kraemer) Edson, Marguerite, (Mrs. E. O.), VI, 1915 .....	Stillwater
Krall, John A., I, 1913, County Agent .....	Manchester, Iowa
Kratka, Ralph, III, 1902, 711 East Fifteenth Street .....	Kansas City, Missouri
Krepps, Samuel J. Jr., II, 1914, Ward Bakery Co., 238 Boyston Street, Watertown, Massachusetts .....	Perry
Krisher, Sherman, I, 1918, Manager, Ford Garage .....	Sweethome, Oregon
Krone, Floy C., VI, 1916, Teacher .....	Marietta, Minnesota
Krone, Jessie M., IV, 1918, Box 13 .....	
Lahman, Wilbur L., III, 1909, Lahman Ice & Coal Co. ....	Stillwater
(Lahman) Simank, Ruth, (Mrs. E. W.), V, 1914, 1839 E. 97th, Suite 11, Cleveland Ohio .....	Hunter
Lahr, Herbert, I, 1920, Box 36 .....	
Lane, Frank P., I, 1913, County Agent Leader, University of Wyoming, or 712 Fremont Street .....	Laramie, Wyoming
Lantz, A. G., II, 1907, Box 423, Engineer .....	Orland, California
Lantz, C. R., II, 1917, Box 41, Engineer, 809 N. Steele St. ....	Tacoma, Washington
Larner, Ray Albert, II, 1920, Engineer, 796 South Avenue .....	Schenectady, N. Y.
(Lauderdale) Percival, Ruby, V, 1918 .....	Stillwater
Laughlin, Mary, IV, 1919, Teacher in High School .....	Lamont
Leicht, H. S., II, 1911, Care A. M. Lockett Co. ....	Houston, Texas
Leslie, Lewis, V, 1918 .....	Blackwell
Leteer, C. R., I, 1908, 1023 Bixby Avenue, S. W. ....	Ardmore
*Lewis, Arthur, III, 1901 .....	
(Lewis) Johnson, Myrtle, (Mrs. S. B.), IV, 1910, Florist, West M. & Maple, Montrose, Colorado .....	Enid
Lewis, Carrie, III, 1905, Manager, Oil Company, Box 556 .....	Lawton
(Lewis) Stinson, Inez, (Mrs. C. C.), IV, 1919, 214 Arlington .....	New Orleans, Louisiana
Lewis, Clarence W., II, 1916, 1107 Carondelet Bldg. ....	Tulsa
Lewis, E. C., I, 1896, Banker and Oil Broker, 1631 Chayenne .....	Enid
Liebhart, Marion C., VI, 1921, County Agent .....	
Lincoln, Henry J., II, 1903, Ass't. Supt. A. T. & S. F. R. R., or 5531 Drexel Avenue, Hyde Park Station .....	Chicago, Illinois
Lindsay, R. V., II, 1908, County Engineer .....	Kingfisher
Long, Amy, VI, 1918, South Hall, Friends University .....	Wichita, Kansas
Loomis, Alden H., I, 1916 .....	Lahoma
(Loosey) Barnes, Portia M., IV, 1913, at home, Care Baca Grant .....	Seligman, Arizona
Lovell, Thomas J., II, 1912, Ass't. Engineering Division, U. S. Reclamation Service 165 N. Toluca .....	Los Angeles, California
Lovell, Cymon M., II, 1916, 4562 Park View Place .....	St. Louis, Missouri
Lovett, A. E., I, 1904, State Agriculturist and Agent, or 700 Smith St., Fort Collins, Colorado .....	Corvallis, Oregon
Lovette, A. L., I, 1908, Oregon Ag. College, Chief Ento. ....	Stillwater
Lowery, Philip H., I, 1916, Ass't. State Boys Club Agent .....	Billings
Lowman, E. F., V, 1912, Route 2 .....	Tecumseh
Lowry, Fern, V, 1915, Psychologist, Girl's Industrial Home .....	Pennsylvania
(Lowry) Uitt, Ethel, (Mrs. O. G.), IV, 1913, 616 Peebles Street, Wilkinsburg, Pennsylvania .....	Stillwater
(Lowry) McKee, Thco, (Mrs.), III, 1906, 304 East Ninth Street .....	Stillwater
Lowry, Chester H., III, 1902, Attorney .....	Chicago, Illinois
Lynch, H. W., II, 1912, Substation Operator, Commonwealth-Edson Co. ....	
McArthur, C. L., III, 1911, Dairy Bacteriologist, Bureau of Animal Hus., Washington, D. C. ....	Stillwater
McBride, Elmer, VI, 1920, Federal Student Supervisor, O. A. M. C. ....	
McBride, H. F., II, 1903 .....	New Market, Tennessee
McBride, J. F., II, 1904, R. F. D. 4 .....	Pittsburgh, Pennsylvania
McBride, R. Vernon, V, 1915, Commission Business .....	Stillwater
McBride, John D., V, 1911, Bishop Clothing Company .....	New Land, North Carolina
(McBride) Matherly, Iva, IV, 1910, at home .....	Vienna, Illinois
McCall, J. H., I, 1903, Instructor in Agriculture .....	Stillwater
McCarrel, Mrs. Fred, VI, 1918, Teacher in Public Schools .....	Stillwater
McCarrel, Fred, VI, 1916, Ass't. Prof. of Education, O. A. M. C. ....	
McCaslin, W. W., II, 1912, Electrical Division, Panama Canal, Box 361, Balboa, Canal Zone .....	McAlester
(McClure) Nolen, Marguerite, V, 1914, at home, Box 527 .....	Sentinel
McCollom, Walter, V, 1917, Box 117 .....	Sand Springs
McConnell, Marjorie, VI, 1915, Teacher, Domestic Science .....	Stillwater
McElroy, Clarence H., I, 1906, Asso. Prof. Bact., O. A. M. C. ....	Pineland, Texas
McElroy, Claude E., II, 1917 .....	Leedey
McGee, Iris, IV, 1920, Box 128 .....	Ponder, Texas
McIlvain, Charles, I, 1913, Farmer .....	
*McIntyre, J. C., II, 1911 .....	
McKay, M. B., VI, 1911, Ass't. Plant Pathologist, Oregon Ag. College, or 2723 Jackson Street .....	Corvallis, Oregon

McKee, Calvin, VII, 1920, The Varsity .....	Stillwater
McKemis, Glen, I, 1920, Ass't. County Agent, or 224 W. 6th .....	Oklahoma City
McKnight, Goldia, VI, 1920, High School Teacher .....	Cushing
McLelland, William, I, 1914, Farmer .....	East Point, Louisiana
(McLelland) Hogaboom, Mathilde, VI, 1914, 1733 34th Avenue .....	Seattle, Washington
McMullin, Samuel L., II, 1909 .....	Manchester
McNeely, (Capt.) Oscar D., II, 1920, C. A. C. 59th Artillery Fort Mills, Corregider, P. I. ....	Edmond
McPheeters, Marguerite, IV, 1912, Professor of Home Economics .....	Edmond
McPheeters, T. R., VI, 1917, Superintendent of Schools .....	Stillwater
McPheeters, Mariha, IV, 1913, Ass't. State Home Demonstration Agent .....	Fairbault, Minnesota
McPheeters, A. A., I, 1912, 527 East Fourth Street .....	Stillwater
McPheeters, W. H., II, 1909, Extension Farm Engineer, O. A. M. C. ....	King City, California
McReynolds, A. B., II, 1899, Box 216 .....	Chicago, Illinois
McReynolds, S. A., III, 1902, Chemist, 2055 West Adams Street .....	Cyril
McTaggart, Ernest D., VII, 1920 .....	
Madigan, Blanche, IV, 1917, Teacher, Box 757 .....	Bristow
Madigan, Gladys, VII, 1919, Box 1111 .....	Oklahoma City
Mahaffey, Max, II, 1918, Empire Gas & Fuel Co. ....	Eldorado, Kansas
Mallory, Maisie, VI, 1918 .....	Tulsa
Malone, J. S., I, 1900, County Agent .....	
*Mannheimer, Ruth, IV, 1915 .....	Stillwater
Mantle, David Leroy, II, 1918 .....	Indianapolis, Indiana
Mantle, Guy, I, 1915, Teacher, College of Missions .....	Ames, Iowa
(Marble) Canfield, Mable, VI, 1918, 2707 Boone Street .....	Oklahoma City
Marker, Walter, I, 1914, National Life Ins. Co., 1636 West Park .....	Stillwater
Markland, Waldo C., VII, 1921 .....	El Reno
(Markwell) Shaw, Hazel, VI, 1918, 814 West Wade Street .....	Choctaw
Markwell, Rachel, IV, 1919, Box 52 .....	Stillwater
Markwell, Earl D., I, 1919, Inst. in Hort., O. A. M. C. ....	(Somewhere in Mexico)
Maroney, Hugh, V, 1917, Care 502 West St., Stillwater .....	Denver, Colorado
Marple, Vern, III, 1904, American Bank & Trust Co. ....	Chickasha
Marsh, William S., I, 1918, Route 3 .....	Cicero, Illinois
Marsh, Walter R., II, 1916, Man'g. Engineer, 5029 West 23rd St. ....	Long Beach, California
(Marsh) Hansen, Corrine, IV, 1915, 1978 East Ocean Avenue .....	Phoenix, Arizona
Marsh, Venus Lee, V, 1913, Teacher, 606 North Fourth .....	
*Martin, J. Elmer, V, 1917 .....	Okmulgee
Martin, Ewing, VI, 1917, American State Bank .....	Brinkman
Martin, A. O., VI, 1919, Teacher .....	Altus
Martin, A. Frank, VI, 1920, Principal, High School .....	Duncan
Martin, Esther, IV, 1919, Inst. in Home Economics .....	Pawnee
Marx, Loyd, II, 1915, Mercantile Business .....	Pawnee
Marx, Myron, II, 1917, Mercantile Business .....	Honolulu, Hawaii
Mason, Will J., II, 1916, 1st Lieut., 27th Inf., Schofield Barracks .....	Bigheart
Mathews, R. N., V, 1917, Care Bigheart Refining & Production Co., Box 354 .....	Lawton
Mathieu, Elro, I, 1917 .....	Los Angeles, California
Mayall, J. S., II, 1911, Civil Engineer, 136 West Vernon Avenue .....	Drumright
Mayer, Sylvia, IV, 1915, Teacher of Domestic Science .....	Tulsa
Means, P. E., II, 1908, 1520 E. 3rd St., or Ok'a. Iron Co. ....	Chicago, Illinois
Melton, F. Armon, V, 1915, Rosenwald, Hall, University of Chicago .....	Tulsa
Melton, W. A., II, 1913, West 17th Street, or Bradstreet Oil Ref. ....	Woodward
Merrifield, F. R., I, 1913, Box 466 .....	Enid
Merrifield, Martha, IV, 1921 .....	
Merrill, Arthur J., II, 1913, Engineer, Pochahontas & New River Consolidated Coal Co., or 604 Park Avenue .....	Charleston, West Virginia
Merry, George, V, 1913, Chief Chemist, Consumers Refining Co., or Box 372 .....	Cushing
Merydith, C. S., I, 1912, Manager, England Farms, Route 6, Box 4 .....	Ponca City
Miller, Bertha V, 1916 .....	Stillwater
Miller, Ella Nora, VI, 1914, Dean of H. E., O. A. M. C. ....	Enid
Miller, Esther Caroline, IV, 1914, Phillips University .....	
*Miller, L. C., I, 1900 .....	San Antonio, Texas
Miller, Maude, III, 1903, Bookkeeper .....	St. Louis, Mo.
(Miller) Webb, Wilma Viola, IV, 1914, Care R. T. Webb, Wagoner Elec. Co., St. Louis, Mo. ....	Pittsburgh, Pennsylvania
Millikan, Charles, V, 1917, 235 Amber Street .....	Gainesville, Fla.
Miltmore, Cora A., V, 1899, Librarian, University of Florida, or 204 Wash. Ave., Gainesville, Fla. ....	
*Mitchell, Joe, VI, 1915 .....	Chicago, Illinois
Mitchell, L. C., V, 1909, Chemist, Wilson & Co. ....	
Mitschrich, M. F., II, 1913, Electrical Engineer for Maloney Electric Co., or 7th and Hickory .....	St. Louis, Missouri
Mittendorf, T. H., I, 1917, Armour Packing Co., or 5944 Sacramento, Avenue, Chicago, Illinois ....	
(Monday) Roberto, Beulah, (Mrs. Clarence), at home, Care Farmer-Stockman, Oklahoma Bldg. ....	Oklahoma City
*Moore, Mrs. Helen Kyger, VI, 1916 .....	
Moore, Allen J., V, 1911, Tel. Traf. Engr., 1376 Pearl St. ....	Denver, Colorado
Moore, A. I., I, 1908, Minister, Box 832 .....	Kusa
Moore, Raymond H., V, 1908, County Judge .....	Stillwater
Moore, Charles S., V, 1920, Department of Chemistry, O. A. M. C. ....	Stillwater
Moorman, Helen, IV, 1916, D. S. Teacher, H. S., or 315 West 8th .....	Chandler
Moote, Truman P., II, 1910, Room 524, Frick Bldg. ....	Pittsburgh, Pennsylvania
Morgan, Bernice, V, 1904, 415 Newport Avenue .....	Bend, Oregon

Morgan, Roy C., I, 1921 .....	Carmen
*(Morgan) Robinson, Vera, IV, 1917 .....	Tulsa
Morris, Clinton, III, 1898, Box 893 .....	Macon, Georgia
Morris, O. M., I, 1896, Professor of Horticulture .....	Pullman, Washington
Morris, Paulino, VI, 1921 .....	Stillwater
(Morrison) Harrison, Mrs. Virginia, VI, 1915, Stenographer, Wilcox & Swank Attorneys, Stillwater .....	Stillwater
*Morrow, C. E., II, 1903 .....	Broken Arrow
Morrow, Bertha J., IV, 1914, Teacher .....	Broken Arrow
(Morrow) Watkins, Jessie, III, 1903, at home, Route 3 .....	Tulsa
(Morrow) Hall, Ella Mary, IV, 1914, at home, 321 Walnut Street .....	Texarkana, Arkansas
(Moseley) Peck, Mossie, (Mrs. C. P.), IV, 1919, at home .....	Stillwater
Moseley, Isaac, IV, 1921, (at Stillwater after May 1) .....	Bixby
Mosey, Frances, VI, 1917, Teacher, Murray State School, Box 196 .....	Tishomingo
*(Moskold) McArthur, Olga, IV, 1911 .....	Tishomingo
Moyer, O. J., I, 1915, Farmer .....	Deer Creek
Mullen, Clyde W., I, 1915, Farmer-Stockman, Oklahoma Bldg., or 1603 W. 39th, Oklahoma City .....	Oklahoma City
Muncie, Blanche, IV, 1917, Teacher .....	Wynnewood
Murphy, Henry F., I, 1918, Instructor in Agron., O. A. M. C. ....	Stillwater
Murray, Olive E., I, 1917, Coach, Murray State School .....	Tishomingo
Murray, James P., II, 1919, Empire Co., Oil Production Dept. ....	Bartlesville
Musgrave, Letha, IV, 1919, Care Dr. H. M. Kearby .....	Electra, Texas
Myers, Ruth, IV, 1919, Instructor in H. E., O. A. M. C. ....	Stillwater
Myers, S. E., III, 1899, A. T. & S. F. R. R. Co. ....	Perry
Nash, Orman, I, 1921, Agricultural Editor, Times-Democrat .....	Muskogee
Nash, Byron M., II, 1917 .....	Paden
Naylor, R. H., I, 1916, 723 West Watts Street .....	El Reno
Neaves, Eunice, IV, 1920, Box 142 .....	Ninnekah
Needham, I. H., I, 1915, 108 North First Street .....	Ponca City
Needham, Ollie, II, 1909, Westinghouse Electric & Manf. Co., or 7725 Breshear Street .....	Wilksburg, Pennsylvania
(Neerman) Orth, Katherine, (Mrs. A. J.), V, 1917, at home .....	Ranger, Texas
(Nielsen) Taylor, Mary, (Mrs. J. N.), III, 1903, at home, Eleventh & E Streets .....	Perry
Nellis, H. W., II, 1912, Engineer .....	Gatun, Canal Zone
Nelms, E. B., VI, 1918, County Agent .....	McAlester
Nelson, Abigail E., III, 1907, Druggist, R Street, N. W. ....	Washington, D. C.
Nelson, B. B., I, 1921, 1522 North Broadway .....	Oklahoma City
Nelson, Cyrus, III, 1903, Physician and Surgeon .....	Beaumont, Texas
(Nelson) Chandler, Lila E., II, 1903, at home, I R Street, N. E. ....	Washington, D. C.
Nelson, Ivo A., V, 1917, Student, University of Oklahoma .....	Norman
Nelson, Joseph S., II, 1917, 1522 North Broadway .....	Oklahoma City
Nelson, J. A., III, 1905, Physician, I R Street, N. W. ....	Washington, D. C.
Nelson, Stella, III, 1903, I R Street, N. E. ....	Washington, D. C.
Nelson, Vinita, IV, 1916, Instructor in H. E., Box 794 .....	Ponca City
Netick, Joe, II, 1917, Box 881 .....	San Antonio, Texas
Neumeyer, Eunice, IV, 1921, Teacher .....	Turley
Newman, Leo M., II, 1910, Carter Oil Co. ....	Tulsa
(Newman) Batson, Eleanor, V, 1914, at home, 310 N. Bearly Street .....	Madison, Wisconsin
(Newman) Frenzel, Iva R., IV, 1912, 5512 Ingleside Avenue .....	Chicago, Illinois
(Newcomb) Crom, Bonnie, III, 1907, at home, 2513 North Clark .....	Chicago, Illinois
Newell, Rose, VI, 1917, Teacher, 904 Gentry Street .....	Henryetta
*Newland, Mrs. Minnie, V, 1912 .....	Henryetta
Newton, Roy C., II, 1921, Chemistry Student, University of Chicago, or 5558 University Avenue .....	Chicago, Illinois
Nicholls, Charles Leslie, V, 1921 .....	Stillwater
Norh, Esther A., III, 1903, Teacher, 203 Blaine Ave. ....	Geary
Norh, Kate, IV, 1912, 758 South Third Street .....	San Jose, California
Notson, F. Carl, II, 1916, 905 Keeler Avenue .....	Bartlesville
Norris, John G., VI, 1921 .....	Stillwater
O'Brien, G. Edwin, I, 1913, 1721 E. 12th Street .....	Des Moines, Iowa
Odor, Hesper Evelyn, IV, 1919 .....	Arcadia
Oldham, Albert, V, 1915, 314 North Taylor Street .....	Eldorado, Kansas
Oldham, Lola, IV, 1919, Instructor, Murray State School, Box 54 .....	Tishomingo
(Oldham) Doty, Rhodella, (Mrs. Harold), IV, 1917, at home .....	Stillwater
(Olentine) McNeely, Hazel, IV, 1918, at home, Keefton Street .....	Muskogee
Olentine, Fred B., III, 1906, Physician and Surgeon, St. Anthony's Hospital, Chicago, Illinois .....	Chicago, Illinois
Olmstead, Nora, IV, 1919, Teacher, Box 147 .....	Collinsville
Olmstead, (Capt.) Merritt E., V, 1915, 6th Infantry, Jefferson Barracks .....	St. Louis, Missouri
Olmstead, Mrs. Audrey Ferguson, (Mrs. Merritt E.), IV, 1919, 6th Infantry, Jefferson Barracks .....	St. Louis, Missouri
Orr, Don M., I, 1918, Teacher, Box 607 .....	Madill
Orr, Paul F., V, 1915, Harvard Med. School, 706 Huntington Ave. ....	Boston, Massachusetts
Osborn, John, II, 1906 .....	Claremore
(Oschman) Ross, Hattie, (Mrs. A. K.), III, 1907, at home, County Supt. ....	Claremore
(Oschman) Allen, Maude, V, 1912, at home, Box 133 .....	Nowata
Otey, M. J., V, 1902, Financial Secretary and Purchasing Agent, O. A. M. C. ....	Stillwater
Oursler, A. C., I, 1910 .....	Mannsville
(Oursler) Taylor, Elizabeth, (Mrs. Norman), VI, 1912, Box 81 .....	Cushing
Oursler, Anna Lovina, V, 1914, Teacher, 443 S. Thompson Street .....	Vinita
Owsley, William A., I, 1918, Farmer, Route 2 .....	Pawnee

Painter, H. R., V, 1912, Box 95, U. S. Entomology Laboratory	West Lafayette, Indiana
(Parker) Southwick, Hazel, (Mrs. Ivan), IV, 1917	Garber
(Patterson) Krisher, Gladys, (Mrs. Sherman), V, 1919	Perry
*Patterson, Warren H., II, 1915.	
Payne, Loyal F., I, 1912, Assoc., Prof. Poultry Husbandry, K. S. A. C., or R. F. D. 8	Manhattan, Kansas
Payne, William F., V, 1915, Care Dolcman House	Graham, Texas
(Pearson) Melton, Thirza, (Mrs. W. A.), IV, 1913, 9-A, West 17th	Tulsa
Peck, C. P., II, 1914, The Tiger Lunch	Stillwater
Peck, H. L., II, 1915, The Tiger Lunch	Still water
Peck, O. T., II, 1908, The Tiger Shop	Stillwater
Percival, Kathryn, IV, 1919, Box 248	Yale
Percy, Fred, I, 1920, Teacher of Vocational Agriculture	Ninnekah
Pierson, James, W., I, 1916, Farmer and Stockman	Pond Creek
*Pierson, Helen, VI, 1918.	
Pigg, H. F., II, 1902, Asses Company	Mineville, N. Y.
Pitzer, Florence, VI, 1921	Signal
Pochall, R. A., II, 1910, 949 Lucas	Muscataine, Iowa
Poole, Grace, VI, 1917, 407 Duck Street	Stillwater
(Potter) Cox, Hu'da, IV, 1920, at home, 317 Duncan Street	Stillwater
Potts, F. M., I, 1912, Farmer, R. F. D. 3, Box 4	Dexter, Michigan
Powell, Bessie, IV, 1918, Teacher, Highland Park, R. F. D. 1	Chattanooga, Tennessee
*Priest, Stella, V, 1912.	
Putman, O. L., I, 1918, Box 459	Wirt
Radnich, Helen, IV, 1916, Teacher, High School	Cuthrie
Randolph, Robert, I, 1921, Route A, Box 4684	Fresno, California
Ransom, George R., I, 1916	
Ransom, Harry, I, 1917, Dairy Department, O. A. M. C.	Stillwater
(Rapp) Tolbert, Irma, (Mrs. Raymond), IV, 1917, 1016 S. Barker	El Reno
Rapp, C. W., 1915, Dept. Hort., Uni. of Arkansas, or 370 Arkansas Ave., Fayetteville, Arkansas	
Rapp, Miriam, IV, 1921, Teacher	Watonga
Ratcliff, J. A., I, 1907, Route 2, Box 81	Tyrone
Reactor, Frank L., V, 1902, Nat. Ind. Conference Board, 10 E. 39th St., New York, New York	
Reed, Fred A., II, 1911	
Reeve, C. T., II, 1907, Elec. Engineering & Supcrintendent, 128 Mohawk, Cohoes, New York	
Reeve, John Rumsey, II, 1915, Engineer	Hurley, New Mexico
*Regnier, C. E., III, 1899.	
Regnier, M. A., II, 1911	Ponca City
Reid, Guy C., II, 1916, Architect, 429 West 23rd Street	Oklahoma City
(Reid) Arrington, Grace, IV, 1913, Teacher	Warner
Reynolds, F. S., I, 1915, Smith-Hughes Teacher	Gracemont
Reynolds, E. B., I, 1914, Experiment Station, Texas A. and M. College, College Station, Texas	
Reynolds, Oris H., II, 1914, 705 South Campbell St.	Springfield, Missouri
Rhoades, T. W., II, 1913, Oil Business, Box 349	Burkburnett, Texas
Richards, Hattie, IV, 1912, Teacher, High School	Denver, Colorado
Richman, Maude, VI, 1916, Home Economics Supervisor, State Board of Vocational Education, State Capitol	Oklahoma City
(Richman) White, Elizabeth, V, 1915, at home, 127 N. Athenton	Wichita, Kansas
(Richman) Powers, Mable, V, 1915, at home	Oklahoma City
Rinehart, Virgil, I, 1917	Ramona
Ritter, L. B., V, 1910, Chemist, 1720 West 10th St.	Oklahoma City
Roberts, Clarence, I, 1915, Oklahoma Farmer-Stockman, Oklahoma Bldg.	Oklahoma City
Roberts, D. M., VI, 1919, Superintendent of Schoo's, Box 131	Geary
Robertson, Ruben, I, 1917, Farmer, Box 91	Tuttle
Robinson, Joe L., I, 1916, Farm Crops Bureau, Iowa State College	Ames, Iowa
Robinson, William B., I, 1917	
Robinson, A. C., III, 1903, Assayer	
(Rockey) Evans, Nellie, VI, 1914, at home, 119 West 25th St.	Oklahoma City
Roeser, Harry M., II, 1914, Asso. Engineer, Bureau of Standards	Washington, D. C.
(Rogers) McDowell, Bertha, I, 1916, at home, Box 824	Pawhuska
(Rogers) Faulds, Almira, IV, 1910, at home, Route 1	Clearwater, Florida
Roope, Marquerite, IV, 1921	Elgin, Nebraska
Roope, Ruth, IV, 1920, Box 304	Evanston, Wyoming
Rose, Rollin N., I, 1916	Cushing
*Roserbaum, William, VI, 1918.	
Ross, Sam I., II, 1911, Instructor in M. E., Colo. Ag. College	Fort Collins, Colorado
Rose, James K., II, 1910, Hardware Dealer	Madill
Rudd, E. L., II, 1912, 400 West 118th Street, Apartment 35	New York City
(Ruble) Warren, Bertha, III, 1903, at home, 127 East 17th Street	Ada
Rush, W. S., II, 1905, 573 Hudson Street	Oklahoma City
Russell, Carl, I, 1914, Manager, Russell Seed Company	Ardmore
(Russell) Black, Margaret, (Mrs. James A.), IV, 1917	Lawton
Russell, Mary, IV, 1915, 5735 Blackstone Ave.	Chicago, Illinois
(Ryno) Robertson, Madeline, (Mrs. G. W.), IV, 1913	Cushing
Sadlo, Eddie, II, 1921	
Santee, L. A., II, 1913	Prague
Savage, Orville M., I, 1916, Savage Motor Co., 200 N. First St.	Ponca City
Schacfer, Paul, II, 1915	Ponca City
Schnurr, Agatha, IV, 1918, Stenographer	Mountain View
	Woodward

Schnurr, Cornelius, II, 1911, Box 245	Cisco, Texas
Scott, Theresa Mae, IV, 1921, Route 1, Box 205	Sapulpa
Schreiber, S. C., I, 1913, Inspector, Wisconsin Department of Markets, or 514 North Lake Street	Madison, Wisconsin
Schwark, Conrad W., I, 1914, Teacher	Canon City, Colorado
Scott, Christian B., VI, 1920, Teacher, High School, 321 N. Lee	Altus
Scott, Wiley, I, 1915, Financial Secretary, Central State Teachers College	Edmond
Scott, J. Herman, II, 1917	Covington
Scott, Izora, V, 1915, 2653 Ellendale Place	Los Angeles, California
Scott, E. M., II, 1913, Designer, 1511 West 55th Street	Los Angeles, California
Scrivner, Russell, I, 1916, Farmer and Stockman	Maysville
Scroggs, Ada, V, 1919	Perkins
Scruggs, P. C., I, 1915, Teacher, Cameron State School	Lawton
Seabach, Clarence, I, 1921	Blackwell
See, Iva, IV, 1921	Tonkawa
Seeger, E. E., I, 1915,	Billings
Selement, E. J., II, 1910	Yukon
Selph, Layla, IV, 1918	
(Selph) Wilson, Nina, IV, 1915, at home	Fort Towson
(Semke) Harrington, Grace E., V, 1906, Teacher	Garber
(Sexauer) Lewis, Dorothy, (Mrs. H. S.), IV, 1916, 320 Summit Street, Bowling Green, Ohio	Bowling Green, Ohio
Shallenberger, Carvin D., V, 1912, Prof. of Physics, Beloit College	Beloit, Wisconsin
Shannon, Raymond, VII, 1921, Redpath Horner Chautauqua	Kansas City, Missouri
(Shaw) Ester, Anna M., VI, 1910, at home	Seymour, Texas
Shaw, Clarence C., II, 1921	Wewoka
(Shaw) Dixon, Ava, IV, 1914, Box 177	Hedlton
(Sheets) Smith, Grace, (Mrs. R. D.), IV, 1918, Electrical Appliance Shop, or 1021 Frisco Street	Clinton
Sherwood, E. C., I, 1918	
Shelton, L. C., I, 1921, County Agent	Newkirk
Sherrard, Olive, IV, 1921, 312 West Water Street	Centerville, Iowa
Shattuck, Olive Ethel, IV, 1921	Guymon
Shiflett, H. D., I, 1913, Graduate Student, O. A. M. C.	Stillwater
Shiflett, Riley F., I, 1914, Route 2	Goodwell
Shiflett, R. C., I, 1911, Teacher	Goodwell
Shiller, H. H., H, 1917	
Shinn, E. H., I, 1917, 1735 F Street, N. W.	Washington, D. C.
Shiry, E. E., VI, 1914	Lipscomb, Texas
Shively, R. Rex, V, 1902, Glass Works, or 204 Newton Street	Fairmont, West Virginia
Short, Robert, I, 1913	Ardmore
Sieglinger, John B., I, 1913, Agri. Experimental Work, Box 228	Woodward
Sieglinger, Leona, VI, 1919, Instructor in Physics, O. A. M. C.	Stillwater
Simank, Ben O., II, 1915, 1206 Merchants Bldg., or 605 Stoner, Shreveport, Louisiana	Shreveport, Louisiana
Simank, E. W., II, 1914, 1859 East 97th, Suite 11	Cleveland, Ohio
Skaer, Opal, IV, 1921, High School Teacher, 546 S. Zanis	Tulsa
Skinner, E. Ray, VI, 1919, Instructor, High School	Sand Springs
Smeltzer, C. E., II, 1902, Physician, 128 North Horton St.	Jackson, Michigan
Smith, A. Ray, I, 1915, Care Bedouin Temple	Muskogee
Smith, G. C., VI, 1917, Parish Agent, P. O. Box 305	Baton Rouge, Louisiana
Smith, Joe C., I, 1911, Real Estate, or 1912 South Ervay Street	Dallas, Texas
Smith, John Graham, I, 1914, Stock Farming, Route 1	Newlin, Texas
Smith, Elwin J., II, 1914, 102 New Hampshire Street	Lawrence, Kansas
Smith, C. Ray, V, 1910, Real Estate, 616 Main St.	Stillwater
*Smith, Stewart G., III, 1906,	
Smith, R. Rex, V, 1913, Rhea Hotel	Childress, Texas
Smith, W. C., I, 1920	Durham
Sneary, Grace, VI 1920 322 North Hightower Teacher	Altus
Snyder Beryl VI 1917, Teacher	Borke, South Dakota
(Snyder) Jacobs, Georgia, (Mrs. A. W.), IV, 1913, at home	Aitkin, Minnesota
Soule, Clayton E., II, 1921, Contractor, 605 North Pine	Nowata
Southwick, Ivan, II, 1918	Garber
Spalding, John A., I, 1905, Wholesaler	North End
(Spear) Olds, Maude, (Mrs. Leland), II, 1915, at home	Sherrerville, Illinois
(Spear) Scrivner, Mary, (Mrs. Russell), IV, 1915, at home	Maysville
Spencer, Mrs. Tracy Henson, IV, 1918, at home, Box 624	Claremore
Spencer, Joe R., I, 1918, County Agent, Box 624	Claremore
*Spencer, Earl L., I, 1915,	
Speidel, M. John, I, 1910, Farmer, R. F. D. 1	Washington, Iowa
Spohn, R. E., II, 1910, Farmer, Route 1	Glencoe
(Spohn) Konkle, Carolyn, (Mrs. C. E.), IV, 1915, Route 1, Box 22,	Seattle Washington
Spohn, Gladys, VI, 1918, 15 Carroll Street	Hammond, Indiana
(Spurrier) Hedger, Kara, (Mrs. H. R.), IV, 1917, at home, Box 541	Idabel
Stafford, Joe, D., I, 1921	Stillwater
Stallings, Ida, IV, 1915, Bacteriologist, 303 Dugan-Stuart Bldg.	Hot Springs, Arkansas
Stanley, May, VI, 1914, Teacher, 520 West 15th Street	Pueblo, Colorado
(Stadlin) Ewing, Maude, (Mrs. Jeff), IV, 1919	Guthrie
(Standbury) Ranes, Annie L., (Mrs. Geo. O.), IV, 1920, 1505 W. 24th St., Oklahoma City	Oklahoma City
Stebbins, A. A., II, 1909, Postmaster	Garber
Stebbins, Robert R., V, 1909, Farmer	Fairmont
Steele, Jeanne, VI, 1921, Teacher, High School	Ringling

Stevens, H. I., III, 1904, Chemist .....	Quapaw
Stevens, Carl, II, 1921 .....	(Somewhere in Mexico)
Stevens, Margaret McKittrick, IV, 1914, Government Work .....	Wichita Falls, Texas
Stewart, Eldridge, II, 1918, 901 Seventh Street .....	Supply
(Stewart) Jesse, Annabel, (Mrs. W. B.), V, 1911, at home, Box 24 .....	Tulsa
Stewart, F. L., II, 1909 .....	Denver, Colorado
Stiles, George W., III, 1900, Bureau of Chemistry, U. S. Dept. of Agri., 444 Post Office Bldg. ....	Stiwater
Stiles, Mrs. Lottie, VI, 1920, Box 37 .....	Lawton
Stinson, Chester C., I, 1914, County Agent, Box 834 .....	Gould
Stokesberry, Lawrence, I, 1919, Smith-Hughes Teacher .....	El Reno
Stone, Blair H., II, 1921 .....	Quiney, Illinois
Stout, Charles G., II, 1916 .....	Cushing
(Stover) Gougler, Ida, (Mrs. Frank), V, 1908, 1823 Spring St. ....	Indianapolis, Indiana
(Stover) Swander, Nanna, V, 1909, at home, 712 East Moses .....	Pawhuska
Straub, Otto, I, 1910, Buttermaker, Sunshine Dairy .....	Wellston
Stubblefield, E. E., II, 1921 .....	Cordell
Sullivan, Claud S., I, 1921, Teacher .....	Little Rock, Arkansas
Sullivan, Cyril C., I, 1916 .....	Stillwater
Surtees, L. Vincent, I, 1917 .....	Monrovia, California
Sugg, Herbert, I, 1921, Principal of Cloud Chief Consolidated School .....	Topeka, Kansas
Swim, Leslie L., II, 1920, Engineer, 1801 Summitt St. ....	
Swim, Paul M., II, 1920 .....	
(Swope) Dolde, Emma H., III, 1898, 417 East Orange Avenue .....	
Swope, Harold M., II, 1913, Engineer, A. T. & S. F. R. Co., or 921 Brooke Avenue .....	
Talbot, A. E., I, 1912, 1329 Manheim Place .....	Kansas City, Missouri
(Talbot) Buchanan, Gertrude, (Mrs. W. A.), IV, 1914, 12 North 7th, Marshalltown, Iowa	
Talbot, Nora A., VI, 1910, Prof. of Domestic Art, O. A. M. C. ....	Stillwater
Tankersley, P. A., VI, 1919, Route 3, Box 146 .....	Oklahoma City
(Tankersley) McAnineh, Lola, III, 1905, Teacher, Normal School .....	Durant
Tarr, W. A., II, 1904, 1316 Ross Street .....	Columbia, Missouri
Tate, J. A., II, 1909, Sinclair Oil Co. ....	Tulsa
(Taylor) Keith, Jatta, IV, 1916 .....	Wadron, Arkansas
(Taylor) Swim, Inez, (Mrs. Lawrence), IV, 1915, at home .....	Marmamec
(Taylor) Ellis, Jeannette, III, 1907, Home Dem. Agent, or Box 113, Dresden, Tennessee	
Tesone, Silver, II, 1921, Draftsman, 207 Barnes Bldg. ....	Misskokee
(Temming) Casteel, Ruth E., IV, 1912, at home .....	Sand Springs
(Thatcher) Bost, Jessie, III, 1897, at home, 729 Center St. ....	Alva
(Thomas) Hurst, Martha, IV, 1917, at home .....	Medford
Thomas, Harley O., I, 1920, Manager, Ford Garage .....	Stillwater
Thomas, J. R., I, 1915, County Agent, 506 S. Missouri St., or Box 528, Roswell, New Mexico	
Thomas, Olive, IV, 1916, Teacher, Box 5 .....	Edmond
Thompson, Pauline, IV, 1916, Teacher, High School .....	Port Arthur, Texas
Thompson, W. Grady, VII, 1916, Manager, College Cleaners Shop .....	Stillwater
Thompson, Eugene Rose, I, 1912, Smith-Hughes Teacher .....	Luther
Thornberry, J. W., I, 1904 .....	
Thornberry, W. T., II, 1902 .....	
(Thoroughman) Williams, Maude, III, 1904, at home .....	Perkins
Tibbetts, F. J., II, 1910, Salesman, 5220 Twelfth Ave., N. E. ....	Seattle, Washington
(Tie) Woodson, Eula, (Mrs. J. C.), V, 1915, 120 Rowland Ave. ....	Mansfield, Ohio
Tillotson, Bonnie, III, 1909 .....	Guthrie
Tillotson, A. K., V, 1912 .....	
Tilton, Richard T., I, 1920 .....	Nardin
Tingle, J. T., I, 1915, American Guaranty Co. ....	Hooper, Colorado
Tippie, George A., VI, 1917, County Superintendent .....	Weatherford
Tongue, George F., II, 1912, 2408 Forest Avenue .....	Dallas, Texas
Tourtelotte, Evert, I, 1914, High School Inspector, State Capitol, State Dept. Public Instruction .....	Oklahoma City
Treeman, Herbert L., II, 1909, 156 Exeter Place .....	Buffalo, N. Y.
Trekell, Edna, IV, 1918, Teacher, Box 146 .....	Tishomingo
Trekell, Lester, I, 1920 .....	Enid
Trent, Dover, V, 1913, County Agent .....	Okmulgee
Trevethick, Gladys, V, 1921 .....	Hitchcock, South Dakota
Trueax, C. P., II, 1911, 5633 Cottage Grove .....	Chicago, Illinois
Turner, Homer, I, 1915, Teacher .....	Indianapolis
Turner, Mildred, IV, 1921 .....	Pawnee
Turner, Pearl, VI, 1917, Teacher, 421 Hamilton St. ....	Geneva, Illinois
Unzicker, Ben'ah, IV, 1921 .....	Edmond
Utt, Orville G., II, 1912, Salesman, Westinghouse Elec. & Mfg. Co., or 646 Peebles St. ....	Wilkesburg, Pennsylvania
Vance, Alfred William, II, 1916 .....	Arkioia, Kansas
Vance, Leon R., I, 1914 .....	Kiowa, Kansas
Vandervoort, L. A., II, 1912, Consulting Engineer, Box 1956 .....	Ranger, Texas
Varnum, J. Emerson, VII, 1921 .....	
Venters, H. D., V, 1915, Ass't. Bact., State Board of Health .....	Tampa, Florida
(Vermillion) Pearce, Ruth, IV, 1918, at home .....	Edmond

* (Vermillion) Peck, Rachel, (Mrs. Harold), VI, 1916.	
Vezey, E. E., II, 1910, Superintendent of Schools	Bryan, Texas
Vogel, Nira Dent, VI, 1920, 614 North Bell	Shawnee
Voyles, Carl, VII, 1921, Coach, High School	Altus
Wade, A. Earl, I, 1918, Route 1	Douglas
Wade, Gertrude, IV, 1921, H. E. Teacher, University of Texas	Austin, Texas
Walcott, Clint, II, 1920, County Engineer's Office, or Y. M. C. A.	Tulsa
Walker, K. D., I, 1913, Farmer, R. F. D. L, Box 40A	Wyandotte
Walker, Ethel, V, 1902, Teacher, 305 East Palm	Orange, California
Walker, Louis Eugene, V, 1914, Teacher	Fort Worth, Texas
Walker, Morgan, II, 1919, Care Empire Oil Co., or 321 N. State	Eldorado, Kansas
Walker, Edith, IV, 1921	Ryan
Walker, Veda, III, 1906, Librarian	Compton, California
Walker, Florence, III, 1903, Clerk, U. S. Geological Survey, Apartment 214, The Woodworth	Washington, D. C.
Walker, Belle, III, 1902, at home, 229½ West Eleventh St.	Oklahoma City
(Walker) Durand, Fay B., III, 1905, at home	Chicago, Illinois
(Walker) Swinford, Velma, (Mrs. W. B.), III, 1901, 435 Forest Ave, Palo Alto, California	
* Walters, Julia, IV, 1913.	
Walters, Joe, I, 1917, Smith-Hughes Teacher	Macomb
Walters, Margaret P., IV, 1910, Box 945	Visalia, California
Walters, Minnie D., IV, 1910, H. E. Teacher, McPherson College	McPherson, Kansas
Ware, Alta, IV, 1915, Teacher, High School	Henryetta
Warren, Jessie, IV, 1915, Teacher	Olathe, Colorado
Waters, George A., Jr., I, 1916, Farmer and Stockman	Pawnee
(Watkins) Quinn, Leona, VI, 1920, at home	Helena
Watrous, Robert O., II, 1920, Jeweler, 116 East Broadway	Cushing
Watson, W. E., I, 1913, County Agent	Farmington, Minnesota
Watson, Florence, VI, 1914, County Demonstration Agent	Wagoner
Watson, W. P., II, 1913, 415 Millville Avenue	Hamilton, Ohio
Watson, (Capt.) D. H., II, 1911, R. F. D.	Chandler
Weaver, William Carl, VII, 1916, 5424 Lydia	Kansas City, Missouri
Weaver, Earl, I, 1913, Asso. Prof. A. H., Iowa State College	Ames, Iowa
Webb, Howard Floyd, I, 1914, Bacteriologist, St. Riga Hospital	Lima, Ohio
Webb, A. E., I, 1912, Teacher	Two Harbors, Minnesota
Webb, Nix, II, 1918, Route 2	Chetopa, Kansas
Webb, Robert T., II, 1918, Engineer, Wagoner Elec. Co.	St. Louis, Missouri
(Webb) Epperson, Leona, (Mrs. J. H.), IV, 1914, 1202 Mangum St., Durham, South Carolina	
Weber, A. C., V, 1915, University Hospital	Oklahoma City
* Weber, Herbert, II, 1915.	
Weiss, Mary, IV, 1921	Harrah
Wells, E. E., II, 1913	
Werner, Ida Antonia, V, 1912	
Wertz, B. Leo, VII, 1921	Conway, Arkansas
West, William E., I, 1917, Box 58	Warner
(Wheeler) Colglazier, Pearl, IV, 1918, at home	Chillico
Wheeler, C. P., I, 1917, Coach, High School, or 920 N. Main St.	Blackwell
Wheeler, Mabelle, IV, 1920, Teacher	Altus
Wheeler, Birdie, VI, 1916, Teacher	Stillwater
Whitford, Mrs. Helen Tilton, VI, 1918	
(Whillock) Searcy, Beuna, (Mrs. C. G.), VI, 1917, Teacher, 1202 Duck	Stillwater
Whipple, A. F., V, 1914, 2420 Fourth Street	Port Arthur, Texas
Whipple, John, VI, 1920, Teacher, Ada High School	Ada
White, Harry H., II, 1913, Box 273, Engineer	Wynne, Arkansas
White, Bob, I, 1919, H. S.	Sapulpa
Whiteside, A. E., I, 1913, Teacher, 926 S. Eleventh Ave.	St. Cloud, Minnesota
Whitlock, Ernest, V, 1914, Phoenix Ins. Co.	Omaha, Nebraska
Whittenberg, George, II, 1921, Civil Engineer	Stillwater
Wier, Pearl, III, 1917, 919 Delaware Avenue	Bartlesville
Wiener, Lawrence, I, 1915	
Wilber, Herbert F., VII, 1921	Cuthrie
Wilber, Philip A., II, 1919, Dept. of Architecture, O. A. M. C.	Stillwater
Wibourn, Verda, VI, 1915	
Wikel, G. A., II, 1904, Designing Engineer	
Wikel, H. H., II, 1911, Electrical Engineer	
Wiley, R. C., II, 1905, Chemist	College Park, Maryland
Will, Doris C., II, 1910, Sales Dept., Westinghouse Elec. & Mfg. Co., Wilkinsburg, Penn.	
Williams, Armon, II, 1921, Loss Claim Adjuster, 5510 Blackstone	Chicago, Illinois
Williams, George J., VI, 1919, Box 15	Ryan
Williams, Guy P., II, 1910, Elec. Engr., Goodyear Rubber Co.	Akron, Ohio
Williams, R. L., I, 1913	
Williamson, (Capt.) Emery, II, 1916, 7th Signal Corps Div.	Camp Meade, Maryland
(Williamson) Hoke, Carrie, (Mrs. Mac.), IV, 1915, at home	Pendleton, Oregon
Wilson, Grace, IV, 1919, Care Y. W. C. A. Cafeteria	Tulsa
Wilson, J. M., II, 1917, 1239 Montana Street	Chicago, Illinois
Wilson, Hester, IV, 1918, Box 147, Teacher	Cordell
Wilson, Lillian Ella, V, 1918, Box 307	Fairfax
Wilson, Orville G., VII, 1916, Superintendent of School	Pocasset
Wilson, James, III, 1906, Professor, Cornell Uni., or 202 Dearborn Place, Ithaca, New York	

Wilson, Clay E., VI, 1911 .....	Kiefer
Wilson, Harry E., II, 1910, Supt. A. T. & S. F. R. R. Co., or 501 Finney, Chillicothe, Illinois .....	Chandler
Winkleman, Magdalen, VI, 1918 .....	La Kemp
Winn, Annalize, IV, 1917, Teacher .....	Ithaca, N. Y.
Winters, N. E., I, 1911, 210 Dryden Road .....	Charlotte, North Carolina
or (after June 1, 1922) at 1414 E. Fourth St. ....	Denver, Colorado
(Wirfs) Tobin, Clair, IV, 1912, at home, 1515 Grant Ave. ....	Garibaldi, Oregon
(Wise) Lentz, Mable, IV, 1909, at home, Box 41 .....	Amarillo, Texas
Wise, Oscar, I, 1914, Care High School, Man. Tr. Dept. ....	Stillwater
(Wise) Diggs, Blanche, (Mrs. I. O.), V, 1898, 223 Duncan St. ....	Hightstown, New Jersey
Wishnieff, Joseph, V, 1921 .....	Denver, Colorado
Withers, Clay A., II, 1904, Mack Block .....	Wilkinsburg, Pennsylvania
Witte, Herald, II, 1918, 851 Rebecca Ave. ....	Waukomis
Wolfe, J. P., V, 1921 .....	Swissdale, Pennsylvania
Wood, Ray Allen, II, 1914, 6927 McClure .....	Eldorado, Kansas
Wood, Sylvan, III, 1920, Chemist .....	Stillwater
Wood, C. A., II, 1908, Engineer .....	Co'linsville
Wood, Robert Eri, V, 1921, Principal, High School .....	Bartlesville
Woodruff, W. W., II, 1918, Room 822, Empire Gas & Fuel Bldg. ....	Cleburne, Texas
Wood, Sally, IV, 1921, 719 N. Anglin St. ....	Mansfield, Ohio
Woodson, J. Clay, II, 1915, 120 Rowland Ave. ....	Mansfield, Ohio
Woodson, Mortimer, I, 1917, Agriculture Specialist, U. S. Vet. Bureau, 308 First National Bank B'dg. ....	Tulsa
Woodson, Marle M., III, 1902, 336 South Flower St. ....	Los Angeles, California
Woodworth, L. A., I, 1915, 610 North Ash .....	Guthrie
Woodworth, J. E., I, 1905, Care Marland Refinery .....	Ponca City
Woodworth, Clyde M., I, 1910, Agronomy Dept., U. of Illinois .....	Urbana, Illinois
Worthington, W. H., II, 1910, Chief Engineer, Aultman-Taylor Machine Co., Mansfield, Ohio (Word) Cherry, Gurtha, (Mrs. Paul E.), V, 1914, at home .....	Tyrone
Wortman, Leo, I, 1918 .....	Oklahoma City
(Wright) Reid, Gertrude, (Mrs. Guy), VI, 1916, 429 West 23rd St. ....	Clinton
Wright, N. W., VI, 1917 .....	Cashion
Wright, Noah F., VI, 1920 .....	Midwest, Wyoming
Wright, Eva, IV, 1920, 401 North Seventh Street .....	Tulsa
Wright, H. M., II, 1916 .....	Sharpville, Pennsylvania
(Wright) Wimer, Louise, VI, 1912, at home, Box 131 .....	Scott, Mississippi
Wyant, L. D., II, 1917, 815 West Eleventh Street .....	Lamont
Young, J. E., II, 1915, 45 South Fourth Street .....	Stillwater
Young, Kenneth R., II, 1914, Govt. Reclamation Work, Box 67 .....	Stillwater
Young, Trissie, VI, 1919, Teacher .....	
(Young) Murphy, Ione, (Mrs. H. F.), VII, 1920, 305 Washington Street .....	
Young, Verle, VI, 1921 .....	
Znamenacheck, Ed, II, 1908 .....	

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